ANCIENT NEAR EASTERN STUDIES

SUPPLEMENT 53

METAL JEWELLERY OF THE SOUTHERN LEVANT AND ITS WESTERN NEIGHBOURS

Cross-Cultural Influences in the Early Iron Age Eastern Mediterranean

By

Josephine A. VERDUCI

PEETERS

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SITE NAME ABBREVIATIONS

Site names occur in the text in their most common transliterated form and with their definite articles (al, el, er, es, et, ez) removed; for example, Tell es-Sa'idiyeh is Sa'idiyeh. When a site is commonly referred to by both modern and ancient names, it is only referred to by its accepted ancient name; for example, Tell es-Safi/Gath is Gath. The term tell, which denotes a mound marking the location of an ancient site, is also spelled tel or tall. The term khirbet or khirbat denotes a ruin on a hill or mound, and deir refers to a monastery. These identifiers have been removed in order to standardise site names within the text.[1]

SITE NAME		ABBREVIATION
Tell Acco	=	Acco
et-Tell/'Ai	=	'Ai
Tell el-'Ajjul	=	'Ajjul
Deir el-Balah	=	Balah
Tell Beit Mirsim	=	Beit Mirsim
Tell Brak	=	Brak
Tell ed-Daba	=	Daba
Tell Dan	=	Dan
Tell 'Eitun	=	'Eitun
Tell Fakhariyah	=	Fakhariyah
Tell el-Far'ah (South)	=	Far'ah
Tell Hadar	=	Hadar
Tell Jawa	=	Jawa
Tell Jemmeh	=	Jemmeh
Tell Keisan	=	Keisan
Tell Kittan	=	Kittan
Tell Masos	=	Masos
Tell el-Mazar	=	Mazar
Tell Michal	=	Michal
Tell Miqne-Ekron	=	Ekron
Tell Mor	=	Mor
Tell Nami	=	Nami
Tell en-Nasbeh	=	Nasbeh
Tell Qasile	=	Qasile
Tell Qiri	=	Qiri
Tell el-Rechidiyeh	=	Rechidiyeh

[1] The reader will note that British English spellings are employed throughout the document, except for when American English appears in quotations and in published titles, as are found in the bibliography.

Tell es-Sa'idiyeh	=	Sa'idiyeh
Tell es-Safi/Gath	=	Gath
Tell Sera	=	Sera
Tell Shera'	=	Shera'
Tell Zeror	=	Zeror
Tell ez-Zuweyid	=	Zuweyid

INTRODUCTION

Often marginalised as 'small finds' or relegated to the class of 'minor arts', personal adornment is a crucial component in cultural interaction in contrast to its small size. Jewellery is literally superficial — it rests upon the body's surface, yet items of adornment constitute a fascinating field of material culture as they can convey cultural identity in a manner more immediate than verbal communication. Moreover, items of jewellery can be actively involved in the construction of that identity. Therefore, items of adornment are not merely aesthetic artefacts or costume embellishments, but rather they are effective symbolic medium to convey complex information and messages.

In order to examine the role of adornment in the portrayal of cultural identity, I look at the Iron Age (IrA) I–IIA period of the southern Levant (*ca.* 1200–900 BCE). This period, although separated by no definitive cultural break from the Late Bronze Age (LBA), displays certain new features that coincide with the appearance of the Philistines, or other *Sea Peoples*. The early stages of the Early Iron Age (EIA) represent a departure from LBA traditions and evidence of cross-cultural influences within the eastern Mediterranean. By examining various categories of metal jewellery from the southern Levant and its western neighbours, this study contributes to the debate about the relations and exchanges that affected the region during this pivotal period in history.

Metal jewellery is assessed from 29 sites in the southern Levant, the Aegean, and Cyprus, resulting in the creation of the first multi-regional typology of metal jewellery for the IrA I–IIA eastern Mediterranean. Stylistic (qualitative) and measurement (quantitative) analyses differentiate subtypes and regional preferences. Combined with the scoring of artefact similarity between geographic regions, these analyses are intended to demonstrate whether it is possible to identify specific adornment practices that link the southern Levant to its western neighbours.

Through a close and fine-grained analysis of adornment practices, this volume demonstrates that in contrast to previous assumptions, jewellery can be a useful tool in identifying cultural identity. Furthermore, I show that (contrary to expectations, perhaps) there is little to suggest a distinctly Aegean presence in the jewellery of Philistia. Statistical analysis of the data and distribution patterns indicates that the main spheres of influence on the jewellery of Philistia and Cisjordan were in fact Cyprus and Transjordan, and that these practices demonstrate strong local traditions, although there are some anomalous Aegean and Anatolian features. This conclusion supports recent suggestions that the Philistines in fact arrived from multiple origins, including the Aegean, Cyprus, Anatolia, Sicily, Sardinia, and the northern Levant, and then became intertwined with local populations in the southern Levant.

The formation, maintenance, and communication of group identification through physical appearance by these populations is assessed through a phenomenological view of cultural material to explain what is termed *cultural intention*. I examine Southern Levantine

modes of adornment and the manner by which they could be experienced, as well as their role as highly visible emblems of personal identity — a duality within public and private spheres that marked and reinforced social and territorial boundaries.

CHRONOLOGY

COMPARATIVE CHRONOLOGY OF THE EASTERN MEDITERRANEAN WITH APPROXIMATE RELATIVE DATES*

	AEGEAN	CYPRUS	EGYPT	LEVANT
1600	LH I/ LM IA	LC IA		
1550			DYNASTY XVIII (1554)	LBA I
1500	LH IIA/LM IB (1525)	LC IB		
1450	LH IIB/LMII	LC IIA		
1400	LH IIIA/LM IIIA (1425)			LBA IIA
1350		LC IIB (1375)		
1300	LH IIIB/ LM IIIB	LC IIC	DYNASTY XIX (1305)	LBA IIB
1250				
1200	LH IIIC/LM IIIC	LC IIIA	DYNASTY XX (1196)	IrA IA
1150			*ca.*1175 BCE (year 8) Ramses III battle with *Sea Peoples*	
1100	SM (1125)	LC IIIB		IrA IB
1050	SMYC	CG I	DYNASTY XXI (1080)	
1000	EPG		DYNASTY XXII	IrA IIA
950		CG II		
900	MPG			IrA IIB
850		CG III		
800	LPG			

* The chronology for each region is loosely based on the following: Aegean (Cline 2008, p. 453); Cyprus (Gjerstad *et al.* 1934); Egypt (Rothenberg 1988); and Levant (Maeir *et al.* 2008).

Table 1. Comparative chronological table of eastern Mediterranean regions

The beginning of the main period of Levantine history addressed within this volume (*ca.* 1200–900 BCE) was marked by the emergence of the Philistine civilisation in the southern Levant.[1] The chronology of the EIA in the southern Levant is well documented by

[1] The Early Iron Age period in this region is sometimes referred to as 'Israelite' rather than 'Canaanite'; however, many other groups were also in Canaan during the Iron Age, e.g., the Egyptians, Hittites, Hurrians, Philistines, and other *Sea Peoples*: Laughlin 2000, p. 95.

authors of biblical archaeology but remains controversial.[2] Various scholars use different subdivisions for the IrA, making the use of absolute dates for the various strata and tombs difficult;[3] thus, in this volume, I rely most often on relative dates.

OVERVIEW AND AIMS

The aim of this publication is to explore the evidence for Aegean, Cypriote, Philistine, and Canaanite forms in the corpus of metal jewellery from the IrA I–IIA southern Levant.[4] In order to do so, I examine the stylistic characteristics and spatial distribution of various categories of personal adornment.[5] The resulting typology acknowledges the stylistic relationships between the Near East and its neighbours and the relevance of phenomenological archaeology, and addresses issues of cultural identity.[6]

This study of the personal adornment unearthed from EIA sites in the southern Levant consists of an examination and comparison of various categories of metal jewellery and other forms of material culture from Philistia, Cisjordan, and Transjordan.[7] In addition, I examine metal jewellery from the Aegean and Cyprus. Thus, this volume will analyse the evidence for cross-cultural influences within the eastern Mediterranean.

Previously, scholarly research has focused on specific cultures (or countries) without an in-depth understanding of the broader region. A cross-cultural study such as this one is necessary in order to understand patterns within and between particular cultural groups.

In addition to this introduction, this volume contains six chapters and five appendices:

Chapter 1 outlines the methodology used to formulate the dataset, and reviews the theoretical framework used to investigate ancient metal jewellery.

Chapter 2 reviews the literary material that shapes our current understanding of Early Iron Age adornment practices in the southern Levant.

Chapter 3 provides a survey of the sites that are included in the dataset. This data draws from sources such as site reports, catalogues, and typologies.

[2] E.g., Finkelstein (1995; 1996a; 1998) argues that the chronology of the Late Iron Age I–IIA periods should be lowered by 75–100 years. The issue of a low chronology is part of a fundamental dispute over calls for events in the Bible to be treated as myth rather than truth. Thus, the archaeological debate has assumed religious and political overtones; despite having won some approval, the low chronology argument has failed to convince many: see Dever 1999; Mazar 1997b; Stern 2008.

[3] See, e.g., Finkelstein 2005; Finkelstein and Piasetzky 2011; Herzog and Singer-Avitz 2004, p. 230; Katz and Faust 2014; Mazar 2005; 2011. Dates for the southern Levant largely follow the chronology set by Maeir *et al.* 2008, Table 1; dates for Cyprus largely follow those by Gjerstad *et al.* 1934; dates for the Aegean largely follow Cline 2008, p. 453. *Cf.* Ben-Shlomo 2009, Table 1; Manning 2010, p. 23, Table 2.2; Shelmerdine 2010, fig. 1.1.

[4] 'Canaanite' refers to the population of an ancient geographical region roughly corresponding to modern Israel, Palestine, Jordan, southern Syria, and Lebanon. I do not use this term to represent an ethnicity or a definable land called *Canaan*: see, e.g., Rainey 1996.

[5] Regarding the relevance of distribution analysis, see Hodder (1982) and Hodder and Orten (1976).

[6] Ben-Shlomo *et al.* 2008.

[7] 'Cisjordan' encompasses the geographic region of Israel and the areas under the Palestinian Authority, and in most cases is employed in preference to modern or ancient terms such as Israel, Palestine, Canaan, or Judah. Transjordan refers to the area east of the Jordan River, usually in reference to modern Jordan.

Chapter 4 presents a comprehensive typology of metal jewellery from 29 sites across the southern Levant, the Aegean, and Cyprus. I discuss each jewellery subtype in detail and offer specific interpretations when relevant.

Chapter 5 includes the quantitative analyses of metal jewellery types and subtypes for each site and region carried out by applying different methods of statistical analysis: first, frequency and distribution analysis, and second, dissimilarity matrices for pairs of geographic regions.

Chapter 6 offers an interpretation of the data by applying the relevant theoretical paradigms, first at a micro-regional scale using Gath as a site-specific study, and second at a regional scale as an object-specific study. This chapter then summarises the conclusions reached in Chapters 3–6.

Appendix A contains an examination of materials and a glossary of technologies that relate to Early Iron Age adornment practices.

Appendix B contains tables that include general information regarding each object within the dataset by geographic region and by site.

Appendix C includes a catalogue of the metal jewellery from the 29 sites in the dataset (Catalogues A and B) and a complete catalogue of all jewellery (metallic and non-metallic) from Gath (Catalogue C). This data provides the framework for the discussion in Chapters 4–6. This Appendix concludes with illustrations for each jewellery subtype in the typology.

Appendix D presents the frequency and distribution tables for metal jewellery types and subtypes referred to in Chapter 4.

Appendices C and D are available online at https://minerva-access.unimelb.edu.au/handle/11343/91078.

CHAPTER 1

METHODOLOGY AND THEORETICAL APPROACH

Before I proceed with any analysis, a word about the dataset and its methodology. In order to create the extensive dataset, the selection of sites from which to draw the data was first required, followed by an assessment of the stratigraphic contexts at these sites, and the collection and handling of an enormous amount of data (this data is presented in Appendix C). I also discuss the methodology used in formulating a new typology of metal jewellery, according to which each item of jewellery in the dataset is assigned a typological classification.

An examination of the data by means of statistical methods is then used to identify cross-cultural influences in the adornment traditions of five geographic regions (the Aegean, Cyprus, Cisjordan, Philistia, and Transjordan): (1) *distribution and frequency analysis*, and (2) *statistical assessment of similarities and dissimilarities between the regions*. After implementing these measures, it is possible to discuss the theoretical framework used to interpret the data.

1.1 THE DATASET

Five main strategies are employed to create this dataset: (1) *selection of sites*, (2) *analysis of stratigraphic contexts*, (3) *collection of data*, (4) *cataloguing of data*, and (5) *typological classification*. These strategies are discussed below:

1.1.1 Selection of Sites

I divide the southern Levant into two established major regions, Cis- and Transjordan. Philistia is treated not as part of Cisjordan, but as a third region, as this region has an established record of cultural assemblages that demonstrate non-local characteristics.[1] The fourth and fifth regions represented in the dataset are the Aegean and Cyprus. Aegean sites are

[1] The Philistines introduced a range of objects, installations, innovations, and architectural features, some of which (especially in the case of pottery forms) occur across the broader Levantine region. Cultic objects: Ben-Shlomo 2010; Bignasca 2000; Bloch-Smith 1998, p. 4; Dever 1995; Dothan, T. 1982, p. 234; 2002; Hitchcock 2002; Gitin and T. Dothan 1987, pp. 203–204; Maeir 2007; Mazar 1988, pp. 257–260; Reese 2002b; Rosen 1993; Shalev 2004; Sherratt 2003; Stern 1994, p. 96, fig. 49; Yasur-Landau 2001, Table 1; Zuckerman *et al.* 2007, p. 68; Zukerman *et al.* 2010; cylinder-shaped unbaked clay loomweights: Dothan, T. 1994, pp. 46–47; Stager 1991, pp. 14–15; dietary practices: Dever 1995; Hesse 1990, pp. 214–218; Hesse and Wapnish 1997; Hitchcock and Zuckerman 2011; Killebrew 2005, p. 219; Kislev and Hopf 1985; Maeir 2008; Mahler-Slasky 2004, pp. 188–191; Stockhammer 2011, pp. 288–289; architectural features: Barako 2000, fn. 81; Dothan, M. 1981, pp. 156–157, figs. 7–9; Dothan, T. 1998b, pp. 145–158; Laughlin 2000, pp. 61–68; Maeir and Hitchock 2011, p. 46, Regev *et al.* 2010, p. 3002; mortuary practices: Dothan, T. 1982,

included so as to examine the traditional view that the Philistines originated in the Aegean, while Cypriote sites are included because of the significant role Cyprus played in interregional relationships within the eastern Mediterranean at the close of the Bronze Age.

Thus, there are five geographic regions, and from these regions, I have chosen a representative sample of 29 sites. These sites were chosen for their ability to meet all three of the following criteria: (1) the site must have been formally excavated; (2) the excavation must have yielded jewellery; and (3) the stratigraphic and contextual data on the jewellery must be both reliable and reasonably complete. Criterion (3) in particular led to the exclusion of many sites excavated before the 1960s, when the processual movement began to transform archaeological practice.

The five sites selected from Philistia are Ashdod, Azor, Gath, Ekron, and Qasile. While the Pentapolis cities Ashkelon and Gaza are significant in relation to the cultural matrix of Philistia, I exclude them — Ashkelon because the Early Iron Age excavations there await publication and the material remains inaccessible,[2] and Gaza because it has so far yielded almost no relevant data.[3]

Seven sites are selected from Cisjordan: Beth Shean, Beth Shemesh, ʻEitun, Farʻah, Megiddo, Nasbeh, and Taiyiba. The majority of these sites demonstrate either links to Philistia in the adoption of Philistine cultural material, or display evidence of non-local cultural material and thus evidence of long-distance exchange. Six sites are also selected from Transjordan due their geographic proximity to Cisjordan, and the presumption that jewellery traditions are shared by the two regions; these sites include the Baqʻah Valley, Deir ʻAin ʻAbata, Madaba, Sahab, Saʻidiyeh, and Tawilan. In addition, some of these sites in Transjordan also demonstrate preferences for non-local cultural material.

In the Aegean, heavy emphasis is placed on the research of others due to the difficulty of obtaining access to the artefacts. This issue was compounded by the closure of the Herakleion Museum at Knossos, which was undergoing renovation from 2006 until recently. Nevertheless, thorough investigation of well-published sites has enabled the incorporation of material from Kerameikos, the Knossos North Cemetery, Lefkandi, Marmáriane, Perati, and Sellopoulo.

In Cyprus, authorities granted permission to study all the material requested, but in many instances, the artefacts could not be located. Furthermore, very few Cypriote items from late 19th century excavations can be matched with their catalogue numbers.[4] Excavation records

pp. 26–274, 288; 1989; 1993a, p. 129; Kletter 2002, p. 40; linguistics: Davis 2011; Demsky 1997; Gitin *et al.* 1997; Machinist 2000, pp. 63–64; Maeir *et al.* 2008, p. 57.

[2] Summary reports for the years 2007 through to 2012 are available online: Leon Levy Foundation 2013. Future publication of the jewellery from Ashkelon should prove enlightening given the 5968 Iron Age paste beads (MC 60430) found in the Grid 38, phase 20B 'bead room' (see *American Journal of Archaeology* 2009, pp. 3–4) and the recently announced discovery of an Iron Age cemetery: Aja 2016.

[3] Phythian-Adams 1923a, pp. 20–31; Burdajewicz 2000, and Humbert 2000. Recent excavations reveal little evidence of occupation after the Late Bronze Age IIB, and due to the unstable political situation in the region and the fact that established farms have been built on the ancient site, excavation of Gaza remains at a standstill: Fischer 2012.

[4] Myres and Ohnefalsch-Richter 1899. The catalogue noted, 'The Government inspection of excavations is in many cases conducted by untrained persons, whose inventories, even when they are intelligible at all, are valueless for the identification of the objects described' (p. vii).

dated to this period are without fail poor in data (when they contain data at all), although the Cyprus and British Museums have attempted to counteract this problem with the development of online catalogues.[5] The Cypriote sites selected are Enkomi, Hala Sultan Tekke, Kouklia (Palaepaphos), Maroni, and Pyla-*Kokkinokremos*. Records for these sites are much more reliable and complete than is the norm in Cyprus.

I discuss these 29 sites at greater length in Chapter 3.

1.1.2 Analysis of Stratigraphical Contexts

Through an object's context, I can view it in relation to situation and behaviour; that is, I can discuss the object in terms of practice. Context is the link between object and activity that brings artefacts to life and is recognised in and of itself as 'a unit of culture.'[6] Thus, the relevance of context is crucial to not 'isolating what is cognised from life circumstances [which] is often fatally obstructive to understanding cognition.'[7] Objects with a secure context obviously have greater stratigraphical, chronological, and interpretive significance.

When evaluating the stratigraphic attribution of an item, it is also important to consider the mobility of the object. This issue of mobility is particularly relevant in the case of small items that are prone to displacement through natural (erosion, subsidence, animal burrowing) and artificial (intercutting, secondary treatment of burials, tomb robbing, illicit digging) disturbances. The displacement of burial goods over several generations (for example) confuses the chronological attribution of these items. Furthermore, the position on the body in which an item was worn might no longer be apparent. Another consideration is that jewellery may have been taken from burials as heirlooms; these items could then be reused in non-mortuary contexts well after their period of manufacture, during which time they might be modified or reworked.[8] Thus, the dating of some items of jewellery included in the dataset is more reliable than that of others.[9]

The artefacts discussed in this study were recovered from a range of stratigraphical contexts, including settlements, hoards/foundation deposits, and burials. Some challenges have arisen in determining the stratigraphic attribution of some of the material in the dataset. In many instances, particularly with jewellery excavated long ago, no information is available other than perhaps an allocation to a particular stratum or tomb number. At times, the allocation of material to a context, and occasionally even to a site, proves impossible. The dating of objects is therefore dependent both on the quality of the stratigraphy surrounding them, and on the quality of the records kept about their excavation.

[5] Pilides 2010; Kiely 2011; http://www.britishmuseum.org.

[6] Wentworth 1980, p. 92.

[7] Cole 1996, p. 132.

[8] Mazar 1986. Ethnographic studies indicate that in this way inherited social difference was legitimised and the presence of heirlooms might therefore shed light on hereditary rank: Llillios 1991.

[9] E.g., the context of objects from Ashkelon, Ekron, and Gath are more stratigraphically reliable than objects from Tawilan. The dating of the hoard from Tawilan has been a matter of debate, due to the hoard's unclear context and lack of associated occupation levels: see Ogden 1995, p. 75.

Contexts in settlements and occupation zones (such as surfaces, debris, and fill) are usually of greater chronological value due to their fixed relationships to other strata. Settlement contexts also offer the best data for determining everyday adornment practices. Unfortunately, limited quantities of metal jewellery survive from these contexts in the southern Levant. The few finds from settlement contexts in the dataset can be attributed to the accidental loss of objects used in everyday activity, or to the abandonment of objects when a site was left in haste (as indicated, for example, by evidence of destruction or conflagration).[10] I include no finds from occupation strata in the Aegean; this is unsurprising, as little in the way of jewellery derives from settlements in the Aegean.[11] Little jewellery comes from settlement contexts in Cyprus either, and in most cases, these finds are of gold.[12]

Several sites in the dataset yielded jewellery from foundation deposits. In the Levant, such deposits lay within or beneath building foundations; the interment of these offerings as a form of wealthy sacrifice indicates that there was no intention that they be retrieved. By contrast, hidden hoards of jewellery left behind in settlement contexts suggest a plurality of possible functions. Such hoards may have been hidden due to their economic value, or stored as raw materials for later use, or they may have been personal collections that were abandoned in haste.[13] A connection between the practice of burying metal in the ground and periods of political instability has been suggested for Europe; this theory is supported by the concentration of hoards within certain time periods.[14]

Precious metal hoards often include damaged or cut gold or silver jewellery, or shapeless pieces of silver (*Hacksilber*), which might represent the use of these items as a form of currency.[15] Within Europe, hoards of broken metal objects, also refered to as 'founder's hoards', are considered evidence for the circulation of metal during the Bronze Age, possibly as collections belonging to itinerant metalsmiths, although ritual purposes for the hoards are also noted.[16] In apparent acts of ritual destruction, damaged metal weapons, tools, and jewellery occur within hoards across Europe and throughout the BA and into the EIA, often as fragments in Urnfield hoards that are hidden within natural settings.[17]

[10] As occurs with Iron Age IIB remains from Safi: Maeir 2012, p. 216.

[11] In certain circumstances, small quantities of jewellery were lost or abandoned at sites such as Mycenae on the mainland, and Karphi and Mallia on Crete: Konstantinidi 2001, p. 209.

[12] In part, this is due to the rampant looting and the unpublished excavations of the late 1800s: Myres and Ohnefalsch-Richter 1899.

[13] E.g., Timnah, where the jewellery at this 14th–12th century BCE site includes some of the earliest items of adornment made of iron in the region: Rothenberg and Bachmann 1988, p. 29, pl. 6; Beth Shean, which yielded four hoards, including one from Locus 88854 dated to the 12th century BCE: Mazar 1992, p. 54; 1994, p. 134, fig. 2; 1997b, pp. 71–72 (for the remaining hoards from Beth Shean, see Rowe 1940, pp. 19, 26, pls. 29, 66a, and 67a); Tawilan: Ogden 1995; Eshtemoa, variously dated between the 11th and ninth centuries: see Yeivin 1990; Kletter and Brand 1998; Megiddo: Loud 1948, p. 187, pls. 228:4–6 and 229:7–9; Yadin 1970a; Keisan: Nodet 1976; Ein Hofez: Kletter 2003, p. 145; the Judaean Desert Cave: Sass 2002; and Ajjûl, which although of great interest and occasionally referred to in this volume, is clearly outside the chronological scope of this study: refer to Negbi 1970; McGovern 1985, pp. 93–94.

[14] Harding 2000, pp. 352–368 and especially p. 355.

[15] Gitin and Golani 2001; 2004; Kletter 2003; Thompson 2003. Thompson (2009) claims that the silver in the hoard from Stratum S-4 at Beth Shean served a monetary purpose. Caches of silver ingots, *Hacksilber,* and silver jewellery were also found at Ekron, although these date to the seventh century: see Golani and Sass 1998; Gitin and Golani 2001.

[16] Harding 2000, pp. 219, 361.

[17] For references, see Potrebica and Ložnjak Dizdar 2004.

The dataset incorporates a small number of finds derived from Late Bronze Age Cypriote metal hoards. Scholars question whether these deposits are cultic in nature by arguing instead for economic and ideological motivations linked to interregional developments around the Late Bronze Age to Early Iron Age transition.[18] Knapp explains how behavioural patterns can be extended to all hoards, and how votive deposits and hoards of an economic, ideological, or political nature can be distinguished from each other by their utilitarian or non-utilitarian characteristics.[19] Most Cypriote hoards date to the Late Cypriote IIC–IIIA transition (*ca.* 1200 BCE), and are mainly from the prosperous copper-production centre of Enkomi, although they also occur at Pyla-*Kokkinokremos* and Hala Sultan Tekke.[20]

I include no Aegean hoard deposits in this study, as they are few in number and there are issues pertaining to the provenance and/or context of most of them.[21] A few well-known Aegean hoards of significant size and possessing a variety of forms include those from Aegina,[22] Mycenae,[23] and Tiryns.[24] Most Aegean hoards are contemporaneous with Cypriote hoards — around the Late Helladic IIIB–Late Helladic IIIC transition (*ca.* 1200 BCE) — suggesting that hoarding was a response to the politico-economic instability within the Mediterranean at the close of the Late Bronze Age.[25] One exception may be the so-called 'Tiryns Treasure', which appears to have been the possessions of a family who hid the assemblage sometime in the Postpalatial period.[26]

Artefacts in the dataset most frequently derive from burial contexts. These items were perhaps owned by the deceased or gifted by the surviving relative or group, or had a purely funerary function. Some burials with just a single interment may contain jewellery dated to a single period, but multiple burials in the same tomb often represent multiple periods.[27] Use of tombs over multiple periods, however, does not diminish our ability to understand the influences affecting ancient peoples when studying their burial practices; burial types and their remains are informative when drawing conclusions about the religious, cultural, or social characteristics of an ancient people.[28] The finds included in this dataset from the

[18] Knapp 1988b, pp. 149, 159. *Contra* Matthäus and Schumacher-Matthäus 1986, pp. 166–169.

[19] Knapp 1988b, Table 1.

[20] Ayios Dhimitrios, Kition, Mathiati, Myrtou, and Sinda also had metal hoards: Knapp 1988b, Table 2; Åström, P. 1983, p. 8, fig. 12, frontispiece.

[21] Knapp *et al.* 1988, p. 247.

[22] Higgins 1979.

[23] Stubbings 1954; Thomas 1938–1939.

[24] Karo 1930; Matthäus 1980.

[25] Catling 1964, pp. 294–197; Knapp *et al.* 1988, p. 247.

[26] A re-interpretation of the treasure with the benefit of a report by the treasure's original excavator, Apostolos Arvanitopoulos (1915), argues that the presence of objects dating from the Early Mycenaean period through to the Late Helladic IIIC represented the presence of heirlooms rather than the loot of grave robbers. This assessment was made in light of the deposition of the objects within a cauldron, which was consistent with the careful arrangement of goods during the Postpalatial period: Maran 2006, pp. 130–141.

[27] The reuse of tombs over long periods creates difficulties in dating artefacts. The evidence from Kouklia Tomb 8 is a remarkable exception; the contents of the burial were collected for reburial in the cist, protecting them from looters: refer to Catling 1968; Goring 1996.

[28] For instance: in how mortuary material and the human domain interact in the deposition of adornment within burial contexts: Verduci 2017; and in how cultural contacts are evident in Early Iron Age burials in the southern Levant in the introduction and distribution of imported wares: Bloch-Smith 1992, p. 78. Regarding collared-rim jar burials, see Chang-ho 1995, p. 137; Dothan, M. 1961, p. 175; Dothan, T. 1982, p. 55; Raban 1991, p. 21.

Aegean all derive from burial contexts.[29] While the quality and quantity of these goods diminished during the Subminoan/Submycenaean to Protogeometric periods, few objects can be associated with lower social classes.[30] The same pattern is found in Cyprus.

Amongst the burial assemblages, metal jewellery is associated with both genders and with infants through to adults, informing us of ancient attitudes towards social identity.[31] That being said, a lack of skeletal analysis in those cases when artefacts can actually be attributed to individuals often hinders the identification of the gender and age of the person, and thus the attribution of types and motifs to gender and age.[32]

The stratigraphic contexts from which the data has been obtained are presented in Tables D.5–D.9.

1.1.3 Collection of Data

For the 29 sites, I implement 'consecutive sampling', whereby all metal jewellery with available data is included in the dataset, whether or not I could personally examine each object.[33] There were good reasons for choosing this method of sampling. First and foremost: it is exceedingly rare for the entire assemblage of jewellery from a particular site to be available for examination. As Catalogue A shows, many items of jewellery have been lost, and can now be accessed only through excavation or museum records. In other cases, assemblages are scattered amongst museums and storerooms worldwide. In still other cases, excavators, museum directors, and state authorities are unwilling or unable to grant permission to examine objects. The time limit on the production of collection of data for this volume further restricts the number of objects that can be examined firsthand.[34] Though I was able to examine about 1200 (that is, approximately one third) of the 3900 objects in the database, limiting the database only to examined objects would have skewed the regional frequencies and distributions of jewellery types in random ways. By implementing consecutive sampling, I have instead constructed a database that (1) more accurately reflects these regional frequencies and distributions, and (2) is large enough to support the inferences drawn from the statistical analyses of these frequencies and distributions in Chapter 4.

1.1.4 Cataloguing of Data

A database containing the 3900 items of jewellery was first assembled in FileMaker. When possible, items of jewellery were examined microscopically. Below is one data page from this FileMaker database.

[29] The majority of excavated jewellery comes from Crete: Konstantinidi 2001, p. 206.

[30] Konstantinidi 2001, p. 237.

[31] See, e.g., Verduci forthcoming A. Metal possibly yielded apotropaic power useful for protecting against the 'evil eye': Stager 1985, p. 10. The presence of metal objects (other than weaponry) in burials might even mark the burial of traders in these objects: Gonen 1992, p. 15.

[32] Notable exceptions occur at Sa'idiyeh: Green 2007, p. 288; Far'ah: Braunstein 2011, p. 11; Gath: Faerman *et al.* 2011. For the Aegean, see, (e.g.) Higgins 1980b.

[33] Shadish *et al.* 2008.

[34] This volume derived from my PhD dissertation. In the Australian postgraduate system, PhD dissertations must be submitted within four years of induction.

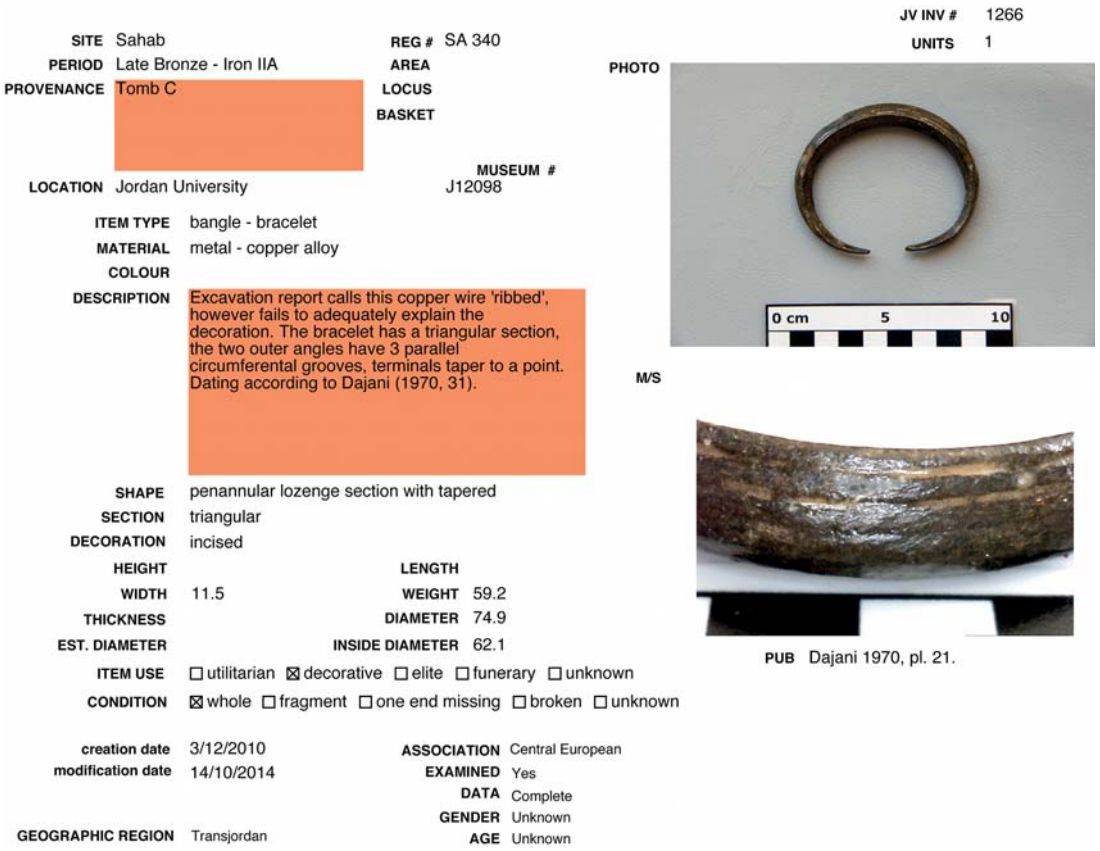
JV INV # 1266
UNITS 1
SITE Sahab
REG # SA 340
PERIOD Late Bronze - Iron IIA
AREA
PROVENANCE Tomb C
LOCUS
BASKET
PHOTO
MUSEUM #
LOCATION Jordan University
J12098
ITEM TYPE bangle - bracelet
MATERIAL metal - copper alloy
COLOUR
DESCRIPTION Excavation report calls this copper wire 'ribbed', however fails to adequately explain the decoration. The bracelet has a triangular section, the two outer angles have 3 parallel circumferental grooves, terminals taper to a point. Dating according to Dajani (1970, 31).
0 cm 5 10
M/S
SHAPE penannular lozenge section with tapered
SECTION triangular
DECORATION incised
HEIGHT
LENGTH
WIDTH 11.5
WEIGHT 59.2
THICKNESS
DIAMETER 74.9
EST. DIAMETER
INSIDE DIAMETER 62.1
PUB Dajani 1970, pl. 21.
ITEM USE ☐ utilitarian ☒ decorative ☐ elite ☐ funerary ☐ unknown
CONDITION ☒ whole ☐ fragment ☐ one end missing ☐ broken ☐ unknown
creation date 3/12/2010
ASSOCIATION Central European
modification date 14/10/2014
EXAMINED Yes
DATA Complete
GENDER Unknown
GEOGRAPHIC REGION Transjordan
AGE Unknown

Fig. 1. FileMaker database inventory page

Once complete, this database was used to generate Catalogues A and B in Appendix C. Each inventory number in Catalogue A includes contextual data such as the site/geographic region, chronological date/phase, provenance, excavation registration, and current location/museum number, as well as publication details. Each inventory number in Catalogue B includes typological data such as the number of items included in each inventory number, category/type/subtype, material, dimensions, and any additional descriptive details.

1.1.5 Formulation and Application of a New Typology of Metal Jewellery

The data in Appendix C was then used to develop a new multi-tiered typology of metal jewellery of the southern Levant, Cyprus, and the Aegean.[35] Initially, each item of jewellery is assigned to one of seven typological categories based on its presumed function: earrings, rings, bangles, pendants, and beads, as well as functional clothing ornaments (toggle pins, dress pins, and fibulae), and foil ornaments (diadems, mouthpieces, and plaques). A division into types then distinguishes between forms; for example, earrings

[35] Non-metallic objects are studied by Ben-Bassat 2011, Golani 2013, and Limmer 2007.

are divided into lunates, lunates with pendants, hoops, hoops with pendants, and so on. The division of material into types (in the processual sense) is necessary for classifying objects according to their similarities and differences.[36] A third stage of classification into subtypes allows for specific variations in form. The proposed typology should be applicable to all Iron Age jewellery, although possibly requiring additional types or subtypes. Several authors utilise the general groups and forms used in this study in their own discussions of Iron Age jewellery from the Levant,[37] but previous classification systems do not distinguish between objects of the Iron Age I, Iron Age IIA, and Iron Age IIB, despite the Iron Age spanning several centuries and witnessing the introduction of new technologies.[38]

Due to the abundant literature on glyptic art, I usually omit scarabs, scaraboids, and seals from the dataset, despite their use in adornment as insignia of rank and office in social and political spheres.[39] I incorporate these objects only when they serve as elements in larger items of jewellery, such as finger rings. Broader issues regarding seals (particularly their iconicity and epigraphy) are the topics of many papers, particularly in relation to the Iron Age II period.[40] In the same way, amulets (which are most frequently non-metallic) are here treated only in terms of their function as adornments: the various possible ritual/esoteric functions of these amulets are not discussed.[41]

By contextualising jewellery subtypes in Chapter 4 within a broad framework that references other specialists, I link the research to the literature review in Chapter 2.

1.2 INTERPRETATION OF THE DATA

Three primary methods are used in the interpretation of the data: (1) *distribution and frequency analyses*, (2) *statistical assessment of similarity and dissimilarity between regions*, and (3) *the application of theoretical concepts in the interpretation of the data*.

[36] A scientific approach developed in the 1960s and 1970s as it became increasingly apparent that data only constituted information when it was interpreted within a framework: e.g., Binford 1977; 1978; 1981; Clarke 1968; Flannery 1972; Watson *et al.* 1971. For a critique of processualism and its relevance to post-processualism, see Tschauner 1996.

[37] E.g., Maxwell-Hyslop 1971; Golani 1996; Golani and Sass 1998; Golani and Ben-Shlomo 2005; Limmer 2007; Maxwell-Hyslop 1984; Ogden 1995; Platt 1972; Sass 2007.

[38] E.g., objects associated with a new ruling elite in the region following the invasion of Philistia by Tiglath-Pileser III in 734 BCE: Pritchard 1969, p. 283.

[39] Brandl 1979; 1980a; 1980b; 1982; 1984; 1985; 1998. See also Keel 1994; 1995; 1997. For additional discussion, see Boardman 1991; 2001 [1970]*; Corpus der Minoischen und Mykenischen Siegel* Vol. 5; Müller 2012. The discussion of Aegean glyptic is extensive: refer to Younger 2009. The corpus of seals from Philistia is limited: see Ben-Shlomo 2006b, particularly in regards to a Canaanite monopoly on seal iconography.

[40] Sass 1993; Gubel 1992; Keel and Uehlinger 1998; Ornan 1993; 2005; Uehlinger 1993.

[41] Refer to Limmer 2007; Andrews 1994; Budge 1961; Herrmann 1994; 2002; Keel and Uehlinger 1998, pp. 181, 268–269, 322; Petrie 1914; Tufnell 1984, p. 1. On Egyptian amulets from Late Bronze Age and Iron Age burials, see McGovern 1980b, pp. 55–71.

1.2.1 Distribution and Frequency Analyses

Given that quantitative analysis might be considered 'the less speculative side of data transformation,'[42] I now consider the quantitative aspect of the research. Using the SPSS statistical analysis program (version 22), I conduct frequency and distribution analyses for sites and geographic regions, including frequency analyses of artefact dimensions and material, and distribution analyses of artefacts by site, period, type, subtype, decoration, context, and regional association. I discuss these analyses in Chapter 5, and present the associated tables in Appendix D.

1.2.2 Statistical Assessment of Similarity and Dissimilarity between Regions

Next, I analyse the data to assess the similarity and dissimilarity of jewellery assemblages between geographic regions, using the statistical procedure detailed in Appendix E. The result is a set of dissimilarity matrices — or in this case, what might be termed 'cultural difference' matrices — that illustrate the similarities and dissimilarities between the regions as measured along 10 different parameters of the data. I discuss the results of this analysis in Chapter 5, and present the associated tables in Appendix E.

1.2.3 Theoretical Framework for Interpretation

The evidence suggests that a wide range of cultural interactions within the broader region were responsible for changes in cultural material at the start of the Iron Age in the southern Levant. My analysis of Early Iron Age jewellery is informed by this paradigm shift, in that I argue that styles of jewellery are related to the visual expression of the identities of competing regional groups. I thus examine the results in light of individual and group intent in culturally determined adornment practices, and the material appropriations and transformations that arise from these practices. The theoretical concepts underpinning these interpretations are discussed below under the subheadings (1) *Embodiment*, (2) *Social Imaginary and Social Memory*, (3) *Entanglement*, and (4) *The Intentional Body*.

The theoretical framework I use here owes some debt to the culture-historical school of thought of the early 20th century[43] and the post-structuralist return to issues of materiality that includes more abstract notions of transculturalism and agency.[44] In acknowledging the

[42] Wolcott 1994, p. 26.

[43] This approach drew a direct correlation between societies with similar material cultures, assumed that change arose from interaction between those societies rather than from internal dynamics, and explained dramatic change in terms of migration or invasion: refer to Trigger 1978, p. 86; Nestor 2010, pp. 12–21. The concept of culture emerged as a shift away from racial classification to explain difference: Childe 1933; 1944.

[44] Post-processualism was a criticism of the focus on universal and generalised laws and theory derived from contextual data, as influenced by Marxist anthropology: e.g., Earle and Preucel 1987; Hodder 1979; 1982; Hodder and Orten 1976; Hodder 1982b; Miller 1995; Miller and Tilley 1984; Shanks and Tilley 1992;

role of objects in cultural relations and matters of agency, I continue the shift of discourse from ethnicity to the entanglement of practices, people, and objects.[45] Objects of adornment in this scenario can be understood not just in terms of items used in processes of exchange, but also in terms of the new meanings that might evolve through the integration of these items into practice.

1.2.3.1 Embodiment

This volume contributes to the analysis of ancient jewellery through an embodiment view of culture and identity.[46] Such an approach is indebted to structuralist theories,[47] semiotic paradigms,[48] and of course, the phenomenological theories of embodiment.[49] Phenomenology brings together theories of embodiment and agency; in a rejection of the Cartesian dualism of mind and body, the interface of the individual and culture is the body.[50] Nevertheless, duality is visible in the expression of individual and collective identities — in our *social skin.*[51] This phenomenological alternative to lived experience argues that the full range of personal and public relations structures a person's sense of self.[52] The agent is shaped by the multiple contexts and influences in which they are placed — their engagement in the world shapes their bodily intentionality and implicates them in the bodily intentionality of others.[53]

Using this methodological approach, I see jewellery as acting on the body, which in turn affects the perception of self, as it is the experiences of the body that form our view of our own relationship with the world. [54] Thus, personal adornment establishes and promulgates

Tilley 1990b; and French philosophy: e.g., Bourdieu 1977; Braudel 1980; Saussure 1977. Cf. long-time critics of post-processualism, Renfrew and Bahn 2004.

[45] Jones 1997, p. 1.

[46] Embodiment theories have become increasingly popular in the study of the individual and society: Csordas 1994; Mauss 1973 [1935], p. 73. For archaeology, see Hamilakis *et al.* 2001; Meskell and Joyce 2003. In a challenge to the *agenda* of embodiment: see Lesure 2005, p. 244.

[47] Lévi-Strauss *et al.* 1977.

[48] Barnard 1996; Barthes 1983; Csordas 1993; Eco 1979; Finkelstein 1991; Lurie 1981. Cf. Davis 1992. This paradigm is seen as focusing on the communicative power of dress and adornment to the exclusion of fashion's relationship to the body and the resultant effect this relationship has on social relations: Entwistle 2000, p. 36. Dress, as defined by Joanne Eicher (1995), is a 'coded sensory system of non-verbal communication that aids human interaction in space and time,' and that the visual aspect of dress is primary in face-to-face interaction. See also Stone 1962.

[49] Refer to Bourdieu 1984; Joyce 2005. Such theories are synthesised by Jones (1997) and Hall (2000). See also Lesure (2005) on how the identification of a *style* intuits the motivations of the original creators of an object.

[50] Bourdieu 1977; Foucault 1977. Mauss (1973 [1935]) and Merleau-Ponty (1962) adopted an approach consisting of the mind infusing the body. For an overview, see Worthman 1999, p. 53, and Rozemond 1998.

[51] Turner 1993 [1980].

[52] On the issue of lived experience, see Hamilakis *et al.* 2001; Joyce 2005, p. 140; Knapp and Meskell 1997, p. 191; Meskell 2000; Meskell and Preucel 2004, pp. 123–124.

[53] Maclaren 2009, pp. 29–32.

[54] On how classic Cartesian logic limits the role of emotion in embodiment, see Knapp and Meskell 1997, p. 185. Recent studies of cognitive neurobiology suggest that emotions are in fact integral to cognition; furthermore, they are an essential aspect of memory formation and retrieval: Worthman 1999, p. 45; Dion *et al.* 2011; Geurts 2002.

one's individual physical experience.[55] In this view, adorning the body develops into embodied practice. The development of this concept incorporates the role of emotion and memory to link socio-cultural and somatic processes.

1.2.3.2 Social Imaginary and Social Memory

Embodiment as a learned and lived experience is closely intertwined with the *embodied* or social imaginary.[56] My methodology presupposes that shared bodily perceptions and understandings define one's sense of belonging to a group and are key in maintaining deeply rooted cultural affiliations across time and space. The concept of the social imaginary is expanded in the discourse on social memory, which incorporates founding memory.[57] This aspect of social memory imbues meaning into the present through its relationship to past traditions. These memories are associated with fixed points in the past whose significance is recalled 'through forms of institutionalised communications using specialised bearers of tradition'[58] — that is, cultural memory is encoded in material culture. The social level of memory also incorporates communicative memory.[59] Communicative memory differs to cultural memory in that it does not require specialists and institutional means of preservation;[60] rather, communicative memory requires a social level of collective transmission that forms a part of everyday interaction, and is thus argued to reach back no more than three or four interacting generations.[61] The durability of these memories is thus framed by the durability of social bonds, while a break in these bonds is implicated in the act of forgetting. I tie these concepts more closely to my interpretations using Paul Connerton's influential study of social memory, which emphasises the need to include bodily practice alongside other accepted modes of transmission, such as texts and cognitive processes.[62] Connerton argues that social memory manifested in bodily practice could create individual or collective identities.[63]

The embodiment of memory in portable objects (particularly conservative cultural practices that are reproduced over extended periods of time) may have served as mnemonics that prompted memories within certain groups over more than one lifetime;[64] memories can be intertwined with these objects to create what is termed a *sense of place*.[65] The discarding of artefacts linked to memory also has a role in the symbolic act of forgetting. This may be an avenue for interpreting the ritual placement of items of jewellery within tombs; some of the

[55] White and Beaudry 2009, p. 214.

[56] Dion *et al.* 2011. The term 'social imagination' was first coined by Mills (1959), but applied to archaeology by Maran (2011b, p. 283). Cf. Anderson 1983 and Taylor 2004, pp. 23–30.

[57] The other type of memory being counter-present memory, which glorifies the past in contrast to the perceived inadequacies of the present day: Assmann 2000, p. 79. For further references, see Maran 2011a.

[58] Maran 2011a, p. 170.

[59] Assmann 2008, p. 109.

[60] E.g., specialists such as priests, teachers, or artists, and reminders in the form of monuments, museums, or libraries: Assmann 2008, pp. 111, 114.

[61] Assmann (2008) views this time structure as lasting between 80 and 100 years.

[62] Connerton 1989, pp. 41–71. This concept has also been applied to Egypt by Meskell (2003) and to the Classic Maya societies of South America by Joyce (2003).

[63] Connerton 1989, pp. 3, 7.

[64] Joyce 2003, pp. 105, 112.

[65] Feld and Basso 1996.

dead would be remembered through strategies of memorialisation, and others would be forgotten in the inequality of grave good distribution.[66] Thus, it seems that symbols possess a multi-vocality — or move between varied entangled states — in ways that determine the relationship of individual agency, cultural and social negotiations, and past events.[67]

1.2.3.3 Entanglement

Having discussed *why* individuals or groups in different geographic regions might appropriate or reject cultural material leads to interpretations of *how* such processes took place.[68] Entanglement can be used to interpret encounters with foreign objects and the various stages that follow: appropriation (or rejection), incorporation, objectivisation, and transformation.[69] The central trigger for such processes of transformation occurs in the initial encounter between different archaeologically defined cultures within a liminal space.

The wide distribution of certain artefacts across the eastern Mediterranean may relate to the intercultural situation that was created by the co-presence of people of different origin in contact zones such as coastal Anatolia, Philistia, Cisjordan, Cyprus, and the Aegean. The motivation to appropriate material culture of foreign origins through networks of exchange (particularly amongst elite persons) could then be modified in relation to local practices.[70] These cross-regional relationships might be better understood as networks, or *webs of significance,* that result in common understandings between groups of people about combining certain material forms in social practice in new entangled ways.[71]

[66] Lillios 1999, p. 146. This embedding of memory in items of adornment was utilised to great effect in Victorian mourning jewellery that could hold a locket of a deceased relative's hair.

[67] Thomas 1991, p. 28; Weiner 1985. On the plurality of language, see Barthes 1974, p. 14.

[68] The debates include cultural hybridity: Stockhammer 2012b, p. 45; 2012c, pp. 1–4; Knapp 2008, pp. 25, 57–61; Burke 2009, pp. 34–65; Feldman 2006a, p. 60; Bhabha 2007, p. 45; and creolisation: Ben-Shlomo 2003; 2006c, p. 90; 2010, p. 176; Ben-Shlomo *et al.* 2004, pp. 20, 28; Killebrew 2005, pp. 197–245; Knapp 2008, p. 60; Shai *et al.* 2008; Yasur-Landau 2003. Hybridity and creolisation are criticised by Hitchcock (2011). See also Maeir (2012, p. 42) and Voskos and Knapp (2008, pp. 559–560); and for transculturalism, see Kraidy (2005), Nielsen (2002, pp. 2–10), and Hitchcock (2011). On the relationship of transculturalism and entanglement, refer to Hitchcock and Maeir (2013) and Stockhammer (2012a). Closely tied to processes of both is the concept of ethnogenesis: Curta 2005; Gillett 2006. Colonialism studies use ethnogenesis to explain the refashioning of Spanish military settlers at El Presidio de San Francisco whereby dress constraints were utilised to fix social identities: Voss 2008. See also Knudson and Stojanowski 2008, p. 414.

[69] This model was developed to explain de-politicised hybridisation processes: Stockhammer 2012b, pp. 43, 47–48. The concept of entanglement when studying cultural relationships outside of the eastern Mediterranean was dealt with by Thomas (1991). Ian Hodder (2011) has also contributed to the entanglement debate with an emphasis on production over meaning. In his view, not only are things the result of human activity but also the resources around them that shape human behaviour. This relationship between humans and things is the underlying principle within symmetrical archaeology, wherein people and things cannot be separated or regarded as distinct entities. This approach was seen as an antidote to contemporary social fragmentation and a means of recognising the past's entanglement with the present: refer to Whitmore 2007; Shanks 2007, p. 591. See also Hitchcock 2011; Hitchcock and Maeir 2013; Maeir *et al.* 2013; Maran 2011a; 2011b; 2012a; 2012b; Stockhammer 2012b; 2012c; 2012d.

[70] According to Crielaard (1998, pp. 194–199), exchange networks at the beginning of the Aegean Early Iron Age were a necessary prerequisite in the transmission of exclusive forms of material culture, or even earlier during the 12th century BCE: refer to Maran 2012a, p. 130.

[71] Maran 2012a. Scholars have long noted the stylistic interrelations and common repertoire of motifs in the eastern Mediterranean evident from early in the second millennium BCE, most notably Kantor (1947) and Crowley (1989; 1998). Feldman (2002) further refined this discussion of artistic production by focusing on iconography and the *international style*.

From an entanglement perspective, a foreign object is not entangled in itself; the process necessary for entanglement requires the joining of foreign and familiar, which is triggered by the object generating a change in the individual. In this scenario, the analytical value of hybridisation commences with encounters between different groups.[72] From an etic perspective, an object might be identifiable as entangled even while its functionality or meaning is lost.[73] Thus, entanglement only occurs once the object has been appropriated and given a new meaning; this process is ongoing and dependent on societal behaviours, as much as individual actions.[74]

The appropriation of new objects does require a displacement of competing objects in a process that entangles a wider audience — reconfiguring the emotions and understandings that the object prompts.[75] The interest in a foreign object might therefore be variable and dependent on perception.[76] The ability to read the symbolic significance of the artefact does not dictate this level of perception, but requires an understanding of competence or technical skill.[77] This approach requires that the viewer see beyond an object's aesthetic value, and is critical of the focus on an object's role in social distinctions. Rather, the viewer should acknowledge the object according to the amount of time, effort, and sacrifice that is invested in it, an investment that is proportionate to the material or symbolic profit that might be gained from possessing it.[78]

While I assume transformative processes are a basic feature of transcultural exchange, the various discourses often neglect the topic of human agency, with individuals represented as socio-cultural constructs rather than as self-created beings.[79] Therefore, I suggest we should look to practices that offer greater flexibility in the formation of new social identities that are not separate from a sense of personal identity, and that can be driven by memory — perhaps of a mythical past.[80]

1.2.3.4 The Intentional Body

Cultural intention is a means of explaining agency in the wearing of *entangled* material. I believe that material culture resulting from entangled processes can also be understood in terms of how that material culture — in this case, personal adornment — might shape and

[72] Stockhammer 2012b, p. 49.

[73] Stockhammer 2012b, p. 51. For criticisms of the ability to distinguish between these stages, see Jung 2009, p. 82.

[74] Stockhammer 2012b, p. 50.

[75] Such a change might also be rejected; in the case of Israelite assemblages, unequal distribution of material arguably signifies cultural conservatism: refer to Faust 2006. On the simplicity of jewellery, see also Platt 1972; 1978. Observations that Israelites are identifiable in the archaeological record might be seen as a critique of ethnic identifications: Thompson 2000, p. 165; Finkelstein 1996b. On discerning identity in the archaeological record at Iron Age I Israelite settlements, see Bunimovitz and Faust 2003; Dever 1995; Finkelstein 1999; Fritz 1977; Herzog and Giveon 1984; Hesse and Wapnish 1997; Bunimovitz and Yasur-Landau 1996; Finkelstein 1996b; 1997; Killebrew 1998; 2005; Faust 2006; Faust and Lev-Tov 2011; Shiloh 1970; Yasur-Landau 2011b, p. 248.

[76] Bourdieu 1990, p. 206.

[77] Refer to Hirsch 1999, p. 159. The pejorative appellation of Philistine no doubt derives from the negative ascription of these peoples in the biblical narrative.

[78] Bourdieu 1984, p. 202.

[79] Meskell 2010; Cohen 1994, p. 6.

[80] Kandel 2007; Assmann and Czaplicka 1995.

define non-material culture. Such processes might encompass communication, sensory experience, thought, and behaviour. What distinguishes cultural intention from more recent attempts to explain cultural processes is an explicit concern with the relationship of material culture and individual behaviour. Exploring this avenue of research requires a twofold approach: (1) a demonstration of the theoretical tools for explaining *changes* in material culture, and (2) the use of hermeneutic phenomenological/somatic understandings of identity (that is, interpretive rather than merely descriptive understandings) to explain the *role* of material culture.

The fluid nature of such an approach matches the fluid conditions that must have existed in the 12th to ninth centuries BCE in the southern Levant. I assume that various foreign groups, as opposed to a heterogeneous population, were involved in intensified contact with local communities, particularly in the coastal plain of the southern Levant. In various degrees, appropriations from each other's cultures would have occurred with countless mergers and alterations to objects and practice. As genealogical ties to the region developed over that period, one might assume that the population discarded some aspects of material culture to make way for new, more desirable objects, while they purposefully retained others that persisted over time. Such practices would have strengthened the symbolic nature of individual or communal ancestries, even if over time (or when worn by different persons) an item might not retain its original meaning or symbolic function.[81]

In Chapter 6, I reflect on these theoretical concerns with the benefit of the intervening quantitative and qualitative analyses. I use the cultural intention framework to interpret adornment at two levels: (1) site specific, and (2) object specific. Initially, using Gath (a local community displaying attributes from different cultural traditions) as a case study, I examine the processes by which Philistine adornment traditions incorporated mainly local traits with reference to the networks of interaction and the social actors involved. This perspective demonstrates how regions labelled (for example) as 'Philistine' display distinct local dynamics, where the acquisition or rejection of material culture was dependent on both personal and shared notions of identity. Secondly, I examine specific objects — in particular, tassel earring forms that were limited to the Iron Age I to IIA periods — in order to discuss a pan-regional understanding of the objects' significance. As a component of social memory, these earrings were possibly involved in creating new-shared realities and might represent the emergence of new cultural identities.

[81] E.g., the amuletic function of a pendant typical in Egypt might not apply when worn by a person in Canaan: see McGovern 1985, p. 1.

CHAPTER 2

LITERATURE REVIEW

The following review outlines past and current interpretations of ancient adornment practice and exposes a gap in scholarship of adornment at a transcultural level for the Late Bronze Age–Early Iron Age transition. Publications focusing on the jewellery of the eastern Mediterranean primarily address periods *before* or *after* the Early Iron Age, or else are limited to subsections of site- or period-specific publications. Perhaps this disinterest in the Early Iron Age reflects the fact that during this period, items of personal adornment in the southern Levant consist mostly of simple types of toggle pins, bangles, finger rings, and earrings. In addition, ornamentation from this period is scarce, and its decoration 'is rarely more elaborate than the execution of basic geometric motifs.'[1] The following review of the relevant publications is organised by region into three subsections: (1) *the southern Levant* (incorporating Philistia, Cisjordan, and Transjordan); (2) *the Aegean*; and (3) *Cyprus*. I summarise the most important publications for each of these regions, first by discussing studies from the early to mid-20th century, and then by discussing approaches that have appeared since *ca.* 1980.

2.1 STUDIES OF JEWELLERY FROM THE SOUTHERN LEVANT

2.1.1 Early Studies

Maxwell-Hyslop's *Western Asiatic Jewellery c. 3000–612 B.C.*[2] remains one of the most comprehensive accounts of ancient Near Eastern jewellery in the literature. This work discusses the stylistic attributes of jewellery and, where possible, its foreign connections. In a chronological approach, Maxwell-Hyslop presents the objects according to the date of their first appearance; however, she does not include them in later periods if their use continued, nor does she address the archaeological context of the material, and the publication is hampered by poor photography. Despite these limitations, few studies of the emergence and development of jewellery in the ancient Near East have appeared in print since Maxwell-Hyslop's publication.

Horace Beck devised one of the earliest classification systems for jewellery,[3] consisting of a comprehensive typology of beads and pendants that is now well-recognised and uniformly used in archaeological research. Beck's typology continues to be useful and remains heavily cited, despite criticism (1) that the study was not based on a real assemblage of beads, and

[1] Tubb 1988b, p. 252.
[2] Maxwell-Hyslop 1971.
[3] Beck 1973 [1928].

(2) that the forms Beck lists do not necessarily occur in reality, given that a bead's shape is often dependent on its material.[4] Despite these criticisms, and in the absence of a more comprehensive and accepted system of bead classification, Beck's typology is still a useful reference tool when studying artefacts made of one material — in this case, metal jewellery, whose form often reveals the method of manufacture.

Stronach produced another important typology on which studies of Levantine fibulae have been based for over 50 years.[5] In this paper, Stronach argued that the distribution of fibulae is directly related to the expansion of Mycenaean trade in the 13th century, which brought the new form to Cyprus and the adjoining Asiatic coast around 1200 BCE, followed by the development of local Syro-Palestinian forms.[6] Stronach rightly noted that the fibula was not in wide circulation prior to Iron Age II (*ca.* 800 BCE);[7] in fact, very few fibulae in the southern Levant date to the Iron Age I–IIA period. Pedde, whose research dealt with the appearance of Iron Age fibulae from Cyprus in the west to Luristan in the east, refined Stronach's typology.[8] By including new data in his analysis, Pedde was able to analyse the distribution of fibulae and increase their usefulness for Iron Age dating. Pedde's publication also contained a comprehensive set of drawings, making his system easy to use. However, his interpretations of the ways in which fibulae were manufactured are not always convincing,[9] thus, despite being an important contribution to jewellery research, Pedde's typology remains less-often cited than Stronach's.

The fibula's predecessor in the Near East, the toggle pin, originated in Mesopotamia *ca.* 3400–3100 BCE.[10] Henschel-Simon's catalogue of toggle pins remains the most widely used typology of this form of garment fastener.[11] His typology demonstrates the shift from an eyelet in the centre of the toggle pin during the Late Bronze Age to one closer to the pointed end during the Early Iron Age. These commonplace Canaanite pins are associated with both males and females,[12] and perhaps signified cultural identity;[13] however, toggle pins at Ashkelon consistently occurred with Egyptian scarabs, implying that there were no barriers to mixing objects from different cultural groups at this site.[14]

Platt attempted a typology of jewellery for the southern Levant in the early 1970s in her PhD thesis, *Palestinian Iron Age Jewelry from Fourteen Excavations*.[15] In collecting data from 14 sites, Platt sought to discuss the context of their material, but failed to assign objects to

[4] Golani 2013, p. 91. More recently, interest has shifted to the technological process of bead manufacture. E.g., Gwinnett and Gorelick (1979; 1981) analysed bead-making in Early Bronze Age Iran, and Stocks (1989) experimented with bead production to understand the process of drilling perforations and to identify the methods for mass-producing ancient stone beads.

[5] Stronach 1959.

[6] Stronach 1959, p. 181. Cf. also the earlier work by Blinkenberg (1926).

[7] Stronach 1959, p. 185.

[8] Pedde 2000; 2001.

[9] Refer to Bjorkman 2004.

[10] Cf. Albright's (1934, p. 609) dating of 3000–2900 BCE. Frankfort (1932, Table 1) accepts 2900–2500 BCE.

[11] Henschel-Simon 1937.

[12] Baker 2006.

[13] Ziffer 1990, pp. 59–61.

[14] Baker 2006.

[15] Platt 1972.

typological categories. However, she did associate certain jewellery types with status and gender.[16] Platt noted that bone club and hammer pendants are plentiful across Canaan, but occur only in contexts without precious metals — the implication being that non-elites wore them as part of everyday attire.[17] Platt also associated plaques with fertility cults, wherein the triangle motif may have represented the female pubic area; [18] she further suggested that representations of females with this area of the body heavily outlined might indicate that these females actually wore a garment with a stylised design of the pubic area depicted on it.[19] These pendants are not relevant to the study of metal jewellery *per se*, but Golani's recent analysis of such objects according to their ethnic affiliation suggests that reinterpreting old studies can reveal previously unconsidered avenues of research.[20]

Evidence derived mainly from mortuary contexts and supplemented by some pictorial and iconographic sources indicates that bangles (bracelets, anklets, armlets), particularly anklets of circular section, were one of the most common categories of metal jewellery in the southern Levant during the Late Bronze Age and Iron Age.[21] In the late 1950s, Olga Tufnell assessed bangles that dated from the Middle Bronze Age through to Roman Periods, focusing especially on artistic imagery. She was particularly interested in distinguishing between bracelets and anklets.[22] The conclusion reached by Tufnell — that anklets were an ethnic marker of an *intrusive* people who moved into the Near East from Central Asia — rests on the premise that a culture trait or object that appears to spread in one direction over time signified a migrating people.[23] Although this theory relates to just one category of evidence and does not consider mechanisms such as trade,[24] items of relative abundance and/or frequent use, such as basic copper alloy bangles, did perhaps enable the purposeful expression of cultural identity.[25]

2.1.2 Recent Studies

The study of adornment has made great progress since the 1980s; in part this progress is due to collaboration between many scholars with excavations that are now well-documented, and to contributions made to the increasingly nuanced examination of Iron Age cultures in the southern Levant. Site-specific and thematic publications of jewellery include several by Benjamin Sass and Amir Golani that emphasise the later portions of the Iron Age.[26] Sass focuses on jewellery as a chronological indicator by positing four phases; of these phases, only the first one pertains to the Early Iron Age (Iron Age IC to Iron Age IIA, corresponding to

[16] Platt 1972; 1976; 1978.
[17] Platt 1978, p. 24.
[18] Platt 1976, p. 110; 1978.
[19] Platt 1976, p. 108.
[20] Golani 2012.
[21] Bloch-Smith 1992, pp. 82, 95.
[22] Tufnell 1958a.
[23] Tufnell 1958a, p. 53.
[24] Barako 2000; 2003. *Contra* Sherratt 1998; Killebrew 2005; and Oren 2000.
[25] Smith 2007, p. 417.
[26] Golani 1994; 1995; 2000; 2004a; 2004b; Golani and Sass 1998; Sass 1997; 2002; 2004; 2007.

the 10th–ninth centuries).[27] Sass omits any reference to the Iron Age IA–B, as he believes that finds from this period are indistinguishable from Late Bronze Age finds. This omission is perplexing, as Sass also identifies new jewellery types that were possibly associated with the arrival of the *Sea Peoples* in the southern Levant *ca.* 1200 BCE; these types include tassel and basket earrings, as well as the massive forms of bangles — particularly those made of iron.[28]

The discovery of three silver caches at Ekron (1985, 1988, and 1992) gave new impetus to the study of Iron Age II southern Levantine jewellery.[29] The caches from the earlier two seasons contained broken and damaged silver jewellery, with the 1988 cache also incorporating cut pieces, known as *Hacksilber.*[30] By contrast, the cache discovered in 1992 primarily consisted of whole pieces of jewellery, although it too contained some *Hacksilber.*[31] Golani and Sass suggest that the earlier caches were silversmiths' collections of recyclable material, or perhaps served as currency, and that the 1992 hoard demonstrated characteristics of ownership by an individual or craftsperson. Within the latter hoard were several of the basket pendant earrings mentioned above; these earrings are believed to have originated in the Levant, possibly in Phoenicia, during Late Iron Age I. [32] In addition to basket earrings, Phoenician features at Ekron include a lotus pendant, a composite earring, finger rings with cartouche-shaped bezels, and multi-stranded rings with a knot.[33]

Whether *Hacksilber* possessed a monetary value or was a form of currency is the subject of relatively recent debate.[34] Kletter reviewed 23 hoards from Iron Age contexts in the southern Levant;[35] he interpreted these hoards as an amalgamation of wealth rather than having any intrinsic artistic merit.[36] Despite possessing monetary value, *Hacksilber* is not currency *per se*, but the presence of *Hacksilber* does raise issues regarding the economy and the symbolic value of jewellery. Having said that, Gitin and Golani maintain that silver acted as currency in the Late Iron Age II, and had for millennia.[37]

Thematic studies of adornment also include an archaeometallugical analysis of the bangles found at Nasbeh.[38] The bangles appeared in stratigraphically mixed tombs, but are predominately dated to Iron Age II; nonetheless, the examination of O-shaped and C-shaped bangles from Nasbeh in this work is a useful contribution to the typology of southern Levantine Iron Age jewellery. The authors posit several alternate scenarios: (1) that the leaded bronze used to manufacture the bangles from Nasbeh came from Transjordan, and that the

[27] Sass 2007, p. 259.
[28] Sass 2007, pp. 250–260.
[29] Golani and Sass 1998.
[30] Golani and Sass 1998, p. 58. See also Thompson 2003.
[31] Golani and Sass 1998, p. 59.
[32] Golani 2013, pp. 117–119.
[33] Golani and Sass 1998, pp. 73–74.
[34] Gitin and Golani 2001; 2004; Kletter 2003; 2004; Thompson 2003.
[35] Kletter 2003. Additional hoards were found at Beth Shean: Rowe 1940, pp. 19, 26; Mazar 1997a, pp. 71–72; Keisan: Briend and Humbert 1980, p. 325; Megiddo: Loud 1948, pls. 228–229; Yadin 1970b, p. 47; Timnah: Rothenberg and Bachmann 1988, p. 29; Dor: Gilboa 1998, p. 413; Wadi el-Makkuk: Sass 2002; Eshtemoa: Yeivin 1990; Arad: Aharoni 1980; Tawilan: Ogden 1995.
[36] Kletter 2003, p. 146.
[37] Gitin and Golani 2004.
[38] Brody and Friedman 2007.

Edomites manufactured the items in weight standards specifically for international exchange; (2) that the bangles were Phoenician or Syrian in origin; and (3) that the O-shaped and C-shaped bangles may each have arrived through different trade networks. Ultimately, the authors conclude that there was an absence of locally-alloyed bronzes and that the bangle weights do not correspond to a Judean weight system.[39]

Several Near Eastern archaeologists have now integrated anthropological approaches into the study of ancient jewellery. John Green, for example, examined the role of adornment at Sa'idiyeh — and in particular the use of anklets — in the expression of gendered difference in Late Bronze Age and Early Iron Age burials.[40] The discovery of many objects *in situ* meant that he was able to differentiate between bracelets and anklets and analyse their association with other grave goods. The scope and precision of Green's work contrasts with the limited analysis possible for many multiple burials in which remains have been disturbed by numerous secondary burials; in such burials, goods are often not associated with skeletons and jewellery cannot be assigned to individuals.[41] The mortuary data from sites such as Sa'idiyeh indicates that infants, children, and women all wore anklet pairs, and high-status males only wore single anklets, a hypothesis supported by iconographic evidence in the Levant.[42] Green argued that by being restricted to women, anklet pairs were symbolically linked to fertility, femininity, and familial protection.[43] The less common practice of males wearing single anklets perhaps served as an indicator of high status.[44] Green elaborates on the use of specific ornaments to express status differences within Late Bronze Age II–Iron Age I tombs;[45] such differences might be demonstrated by the presence of Egyptian-style items within female-gendered assemblages (carnelian lotus-seed vessel pendants, scaraboid beads, and hair-rings), suggesting that Egyptian fashions were associated with high-status female burials.[46]

One of the most significant developments in the practice of adornment from *ca.* 1200 BCE was the appearance of iron jewellery, although iron never succeeded in replacing bronze in the production of small objects.[47] The appearance of iron is associated with the Philistine monopoly on ironworking in Early Iron Age Canaan, according to the often poorly-translated biblical text,[48] although this hypothesis has come under increased scrutiny.[49] Some bangles that date from Iron Age I are distinguished by their weight and by the fact that they were made of iron, such as at Far'ah and Qasile.[50] It may be that there were differences

[39] Brody and Friedman 2007, pp. 109–110.
[40] Green 2007. This study is drawn from Green's PhD dissertation (2006). Regarding the burials, refer also to Pritchard 1980. Cf. the poorly catalogued remains from earlier excavated sites such as Nasbeh: McCown 1947.
[41] Bloch-Smith 1992.
[42] Green 2007, pp. 297–303.
[43] Green 2007, p. 304.
[44] Green 2007.
[45] Green 2010.
[46] Green 2007, p. 771.
[47] Macalister 1912a, p. 270. Regarding the distribution of iron jewellery during the Early Iron Age, see Waldbaum 1978, pp. 24–37.
[48] 1 Sam 13:19.
[49] E.g., Haarar 2001, pp. 267–268.
[50] Mazar 1985, pp. 8–9.

in the way iron and bronze were worn on the body.[51] At Sa'idiyeh, bronze anklets were worn on the lower legs, and iron bracelets and rings were worn on the arms and hands. Arguably, these different uses of the two materials could very well be linked to the prestigious role of iron ornamentation during the Early Iron Age, whereby iron was actively displayed on visible areas of the upper body.[52]

In an ethnoarchaeological approach, Michele Marcus applied the theories of Wobst to the lion-demon pins of Iron Age Urartu in an attempt to link styles with signifiers of group identity.[53] Using Wobst's theories as her underlying paradigm, Marcus suggests that the degree of a pins' visibility was key in the maintenance of ethnic boundaries, although some scholars have reservations about ascribing ethnicity to ancient material.[54] Another study by Marcus of shroud pins from Hasanlu (*ca.* 1100–800 BCE) concludes that these pins were gendered articles of adornment associated with elite burials. Interestingly, Marcus suggests that pins might identify marital status and other stages of the female life cycle;[55] furthermore, she stresses that female adornment — and therefore female bodies — were an essential complement to visual representations of elite male power.[56]

Several dissertations contribute to our understanding of Iron Age jewellery in the southern Levant. Abigail Limmer's PhD research on the Iron Age II jewellery of Israel and Judah suggests criteria for identifying the apotropaic function of objects; the criteria include colour, material, and the terminology for jewellery in the Bible.[57] Her research ascribes little ritual purpose to bangles, earrings, and rings, which were more likely to act as indicators of wealth, status, gender, and marriageability.[58] Scarabs, scaraboids, beads, and pendants were more likely to act as amulets, particularly when made in culturally significant colours: blue-green (turquoise), blue-purple (lapis lazuli), red (carnelian), and a neutral colour (bone).[59] If these colours were in fact culturally significant, then it might also be important to consider the symbolic or apotropaic power of the colours of metal.[60]

Amir Golani also studied the jewellery of the southern Levant from the Iron Age II period.[61] This comprehensive treatment of the region's jewellery expanded on his MA thesis and incorporated data from the unpublished Early Iron Age strata from Ekron.[62] Golani's catalogue of jewellery from the Bronze through to Persian periods is most helpful in understanding craftsmanship and the chronological range to which artefacts belong, especially objects dating to the Iron Age II period and objects introduced by the Phoenician

[51] Green 2006, p. 164.
[52] Green 2006.
[53] Marcus 1993; Wobst 1977.
[54] Green 2006, p. 84; Jones 1997, pp. 106–127.
[55] Marcus 1994, pp. 5–7.
[56] Marcus 1994, p. 12.
[57] Limmer 2007. Other theses concerned with Iron Age jewellery types include those by Abdo (1997), Ben Basat (2011), and Shifris (2010).
[58] Limmer 2007, p. 387.
[59] Limmer 2007, p. 390. E.g., Bar-Yosef Mayer and Porat (2008, p. 8548) argued that the appearance of green beads was directly linked to the transition to agriculture in the Near East, after which they were used as amulets for fertility and to ward off the evil eye.
[60] Clarke 1986; DuQuesne 1996; Wilkinson 2001.
[61] Golani 2013.
[62] Golani 1996.

culture. He developed a comprehensive classification system that, although a valuable aid, places little weight on foreign traits in Canaan; rather, Golani claims, '…the cultural traits of local [Levantine Iron Age II] jewellery appear to have moved in one direction — outwards...'.[63] Nonetheless, one of his conclusions is that jewellery does act as an indicator of foreign influence on a culture, and that southern Levantine jewellery demonstrates significant Phoenician features, in addition to influences from the Egyptians and Neo-Assyrians. Golani's typology has little focus on beads and pendants, such that other scholars researching these forms have been unable to apply his system.[64] Typological gaps in Golani's system, such as for clothing attachments and foil ornaments, render his typology unsuitable for the current study.[65]

A typology of a narrower subset of material is offered by Patrick McGovern, whose research dealt with Late Bronze Age Palestinian pendants, although it is also applicable to Iron Age I–IIA pendants.[66] He created a system of classification from a large corpus of pendants divided according to six types: (1) Egyptian deities; (2) flora; (3) fauna; (4) geometric forms; (5) hieroglyphs; and (6) human forms. His aim was to investigate the relationship between pendants from Egypt and the southern Levant. McGovern reaches two significant conclusions relevant to the study of Iron Age jewellery: firstly, he supports the assumption that the large mass of faience pendants from Beth Shean and Lachish is of local workmanship rather than imported from Egypt;[67] and secondly, he claims that during the Late Bronze Age, the southern Levant was part of the Egyptian empire, at which time there was 'gradual infiltration of Egyptian related-types' into Canaan.[68] In McGovern's view, local people may have been aware of the Egyptian meaning of objects, but reinterpreted them according to local beliefs.[69] The same argument has been used to interpret the material culture from Far'ah.[70]

Typically, most other publications that deal with Iron Age Levantine jewellery are catalogues in volumes on specific archaeological sites. Many of these publications use Golani's jewellery typology as their main analytical tool.[71] Yet, despite containing hard data, these publications typically only loosely couple the data with interpretations of the material. This lack of in-depth discussion has prompted a closer examination of the available archaeological evidence in the current study.

[63] Golani 2013, p. 85.

[64] Ben Basat 2011.

[65] Golani (1996, p. 19) utilised a critical apparatus to indicate the degree of certainty of an object's stratigraphic and chronological assignment at Ekron using signs to denote six categories (**, *, x, ++, +, and -). Whilst this system is most useful in assessing the finds from less secure contexts, a numbering system might be a more practical method for ease of interpretation and for future statistical analysis.

[66] McGovern 1985. This publication developed from McGovern's 1980 PhD dissertation of the same title.

[67] McGovern 1985, p. 104.

[68] McGovern 1985, p. 99.

[69] E.g., *wd't* = evil eye: see McGovern 1985, p. 102.

[70] Braunstein 1998; 2011.

[71] Golani 2004a; 2004b; 2009; Golani and Ben-Shlomo 2005. But see also Bienkowski 1995; Maxwell-Hyslop 1984; Ogden 1995; Paice 2004; Park 2011; Ray 2009; Sass and Cinamon 2006.

2.2 STUDIES OF JEWELLERY FROM THE AEGEAN

2.2.1 Early Studies

Late Bronze Age jewellery design, which borrowed heavily from Minoan traditions,[72] reached its zenith by the Late Helladic IIIB at Mycenae.[73] The abundance and diversity of gold jewellery in Late Bronze Age tombs demonstrated the wealth of the ancient Aegean world and led to publications that, to a certain extent, ignored jewellery of other materials. These publications form the bulk of early 20th century research on Aegean jewellery, and include works on the Acropolis Treasure of Mycenae,[74] the Tiryns hoard,[75] the cemetery at Perati,[76] Dendra,[77] and the Aegina Treasure.[78] A series of excavations published from the early 1950s offered more in-depth accounts of archaeological fieldwork in Crete and the Greek mainland, with detailed recording of stratigraphy and complete catalogues of the finds.[79]

Emily Vermeule's examination of the wealth of jewellery from the shaft graves at Mycenae is especially significant; her results questioned the traditional gender-specific belief that skeletal remains with jewellery were female and those with masks and weapons were male.[80] Anthropological analysis of burials from the Shaft Grave period does now distinguish particular items as gender- and age-specific.[81] Vermeule's research represented a considerable leap forward in scholarly studies during the early 20th century by moving beyond mere catalogues of museum collections, or publications that focus only on prestige items while offering little interpretation of those items or their contexts.

Early publications specifically dealing with museum collections, such as Marshall's catalogue of Greek and Roman jewellery in the British Museum[82] and John Boardman's museum catalogue *The Cretan Collection in Oxford*,[83] offer a comprehensive overview of Aegean jewellery, although these publications invariably provide very little contextual data. In his catalogue, Marshall attempted one of the first scientific accounts of a large representative sample of jewellery, while the work by Boardman — depicting objects held in the Ashmolean Museum — is particularly noteworthy as it describes the largest collection of Iron Age artefacts from Crete outside the Herakleion Museum. There was also a focus on specific categories of adornment, such as a volume by Boardman dedicated to finger rings;

[72] See, e.g., some of the earliest jewellery exposed at the Prepalatial cemetery at Mochlos: Seager 1912; Davaras 1975.

[73] Evans 1880 [1967]; Schliemann 1880 [1967]. For individual tomb contents from Mycenae, refer to Wace 1932 and Xenaki-Sakellariou 1985.

[74] Thomas 1938–1939.

[75] Evans 1880 [1967]; Karo 1930; 1934.

[76] Iakovides 1969–1970.

[77] Persson 1928, pp. 89–92; 1942.

[78] Evans 1892–1893.

[79] E.g., Davidson 1952; Hutchinson and Boardman 1954; Hutchinson 1956; Brock 1957; Boardman 1967b.

[80] Vermeule 1975, p. 8. Cf. Rehak 2009.

[81] Haas-Lebegyev 2012; Konstantinidi 2001. Refer also to Laffineur (1989, pp. 32–235) regarding the attribution of grave goods to specific burials.

[82] Marshall 1911.

[83] Boardman 1961.

this work expanded on an earlier publication of Marshall's by including scientific analysis and excellent photographs.[84] Boardman's examination of each object is thorough and detailed, and includes useful suggestions on artisanship and origin, particularly in regards to engraved gems.

The work of Reynold Higgins, one of the most prolific authors on Late Bronze Age–Early Iron Age Aegean jewellery, heralded a more nuanced interest in regional influences on local jewellery.[85] His volume *Greek and Roman Jewellery* (expanded and updated in 1980) is especially valuable for its list of Mycenaean relief beads.[86] According to Higgins, the predominance of Cretan artisans ended with the destruction of the Knossos palace, a theory with some support,[87] although in later years he was of the opinion that jewellery after the collapse of the Mycenaean civilisation (*ca.* 1180 BCE) may have been richer than generally supposed.[88] By presenting a chronological overview of material — mainly rings, earrings, and fibulae — Higgins highlights the different stylistic influences that affected jewellery manufacture between 1100 and 800 BCE as a result of the waxing and waning influences of local, Cypriote, and Near Eastern traditions.

One of the earliest typologies of Aegean jewellery was the pioneering 1926 publication by Blinkenberg on fibulae.[89] As fibulae vary extensively, later publications (though thorough) have typically focused on a specific region, such as Thessaly,[90] Lefkandi,[91] or the Aegean islands;[92] such regional studies continued into the 1980s.[93] Efi Sapouna-Sakellarakis' contribution is perhaps the most comprehensive one since Blinkenberg's treatment of the topic.[94] Using Blinkenberg's typology, she revisited much of the jewellery from the Aegean Islands and updated its chronology. The quality of this publication highlights the need for an all-encompassing catalogue that also includes mainland fibulae.

Jacobsthal's 1956 typology of dress pins was the earliest publication dealing with this category of clothing attachment.[95] Snodgrass and Desborough also had their own schemes for pin classification.[96] There are now multiple typologies for pins; I discuss these typologies below.

2.2.2 Recent Studies

From the late 1970s, publications on Aegean jewellery contained a greater quantity of contextual, technological, and functional analysis. John Younger in particular has published

[84] Boardman 2001 [1970]. Cf. Marshall 1907.
[85] Higgins 1961; 1965; 1969; 1979; 1980a.
[86] Higgins 1980a, pp. 77–81.
[87] Higgins 1980a, pp. 70, 76; Popham and Catling 1974, p. 221.
[88] Higgins 1969; 1980b.
[89] Blinkenberg 1926.
[90] Kilian 1975.
[91] Catling and Catling 1980, pp. 233–244.
[92] Sapouna-Sakellarakis 1978.
[93] Kilian 1985.
[94] Sapouna-Sakellarakis 1978.
[95] Jacobsthal 1956.
[96] Snodgrass 1971, pp. 226–228; Desborough 1972, pp. 294–300.

extensively on Late Bronze Age seals and finger rings.[97] Finger rings are also a component of Krzyszkowska's comprehensive volume on Aegean seals.[98] Ingo Pini's more recent study of rings from both the Aegean and Cyprus addresses ring size in relation to gender,[99] although Younger suggests that some rings may have not been worn on the finger at all.[100] In *Representations of Minoan-Mycenaean Jewellery*, Younger also offered a detailed study of jewellery based on its representation in seals, frescoes, and statuary; he noted that although few men wore items of adornment apart from armlets or earrings, the majority of people did wear some form of jewellery. In addition, he observed that for the most part, men wore armlets, and women wore bracelets, while anklets — when worn by either sex — possibly signified being bound or consecrated.[101] Also of note is his hypothesis that beads may have had a monetary value and been used for barter.[102]

A number of studies focus on understanding the cultural significance and function of jewellery in ancient Aegean society. These studies include Eleni Konstantinidi's comprehensive catalogue of Bronze Age jewellery from tombs in mainland Greece and on Crete.[103] Her findings suggest that jewellery was rare in Mycenaean Athens,[104] an interesting conclusion given the prevalence of jewellery in the subsequent period at Kerameikos. She also observed differences in the distribution of certain jewellery types; for instance, beads are most common in child burials, while dress pins are most common in adult male burials.[105] Maria Effinger undertook a similarly comprehensive study of Minoan jewellery.[106] Her findings suggest a negative correlation between the jewellery depicted in wall paintings and the jewellery recovered by excavation. While we might explain this discrepancy by supposing that the living often adorned themselves with perishable materials, or by supposing that jewellery differed in significant ways depending on how it was used[107] — in daily life, as burial goods, or for ritual purposes — Effinger's findings suggest that we should at least treat with caution conclusions about adornment practice drawn from representational art.[108]

As noted earlier, typologies for specific forms, such as dress pins, remain confusing due to the fact that different typologies continue to be used in different regions. A review of dress pins by Imma Kilian-Dirlmeier in the *Prähistorische Bronzefunde* series is mainly concerned with pins from the Peloponnese;[109] she argues that Early Iron Age pin types in this region were local developments of Late Bronze Age pins.[110] In Kilian-Dirlmeier's view, the use of dress pins did not suddenly increase in Late Helladic IIIC and the Early Iron Age; rather,

[97] These publications include Younger 1977; 1979; 1984; 1988; 1992; and 2010.
[98] Krzyszkowska 2005.
[99] Pini 2010.
[100] Younger 1977, pp. 149–152. Cf. Verduci and Davis 2015.
[101] Younger 1992, pp. 269–272, 274.
[102] Younger 1992, p. 268. For more recent discussion of pre-monetary economies, refer to Gitin and Golani (2004) and Kletter (1998; 2003; 2004).
[103] Konstantinidi 2001.
[104] Konstantinidi 2001, pp. 126–127.
[105] Konstantinidi 2001, pp. 244, 247.
[106] Effinger 1996.
[107] Effinger 1996, pp. 19–22.
[108] See Younger 1992.
[109] Kilian-Dirlmeier 1984.
[110] Kilian-Dirlmeier 1984, pp. 80–82.

a change in mortuary customs — from multiple to single burials — simply enabled the pins to survive with greater frequency.[111] A later study of Cretan pins by Lucia Vagnetti remains unpublished, although Catling used her classification system to assist him in describing the bronze pins from the Knossos North Cemetery.[112] Curiously, Snodgrass used his own system to describe iron pins in the same publication of that site.[113]

More recently, archaeological discussion about jewellery has moved toward answering more fundamental questions about what jewellery might indicate about status, identity, social environment, and the interconnections between Crete and other areas of the eastern Mediterranean.[114] According to Kanta, for example, the association of jewellery with weaponry, tools, and other bronze and iron artefacts in Late Minoan IIIC and Subminoan burials on Crete may signify the presence of 'warrior graves' that are linked to Greek mainland and Cypriote influences.[115] Jung also argues for the complex web of relationships amongst Mediterranean communities (particularly between Italy and the Aegean during the 11th century BCE) in relation to their respective ideological systems, as demonstrated by ritual deposts — specifically the rich hoard from Delos — that include gold foil ornaments with symbols absorbed from Italy such as crossed-wheel motifs.[116] Contributions to edited volumes, such as *Ancient Jewelry and Archaeology*,[117] and the proceedings of the 2010 Aegaeum conference *Kosmos: Jewellery, Adornment and Textiles in the Aegean Bronze Age*,[118] also deal with relationships between jewellery, gender relations, and the processes of social identity formation. Maia Pomadère, for instance, discusses the evidence for associations between sex/age and jewellery,[119] and suggests that beads, earring pairs, finger rings, and dress pins were female-related objects linked to both women and girls in the Aegean.[120]

2.3 STUDIES OF JEWELLERY FROM CYPRUS

2.3.1 Early Studies

Standards of archaeological excavation on Cyprus at the end of the 19th century were deeply compromised by the quest to furnish foreign collections.[121] As a result, literature from this period focused heavily on the cataloguing of museum collections with little regard for context or significance.[122] Furthermore, these publications are invariably incomplete or

[111] Kilian-Dirlmeier 1984.
[112] Catling 1996a, p. 554, fn. 1126.
[113] Snodgrass 1996.
[114] See, e.g., Laffineur and Greco (2005), and an earlier publication by Bouzek (1985).
[115] Kanta 2003; Tsipopoulou 2005.
[116] Jung 2007, p. 240.
[117] Calinescu 1996.
[118] Nosch and Laffineur 2012.
[119] Pomadère 2012. Cf. e.g., Warren 1975, pp. 123, 131; Demakopoulou 1988; Effinger 1996, pp. 23–41; Higgins 1980a, pp. 64–68, 75–82; Kilian-Dirlmeier 1980a; Younger 1992, pp. 261–269; and Xenaki-Sakellariou 1985, pp. 292–312. Further references are available in Hughes-Brock 1999.
[120] Pomadère 2012, pp. 428–429, 435. See also Smith and Dabney 2012.
[121] Goring 1988.
[122] Cesnola 1885; Myres and Ohnefalsch-Richter 1899.

dominated by those objects deemed of greatest interest. The large-scale removal of artefacts from sites, and a disregard for their storage and conservation, meant that objects discovered at this time were (and remain) in such a poor state that it is often difficult to identify an object's origin, let alone its context:

> The collection of ornaments, trinkets, and small household and toilet utensils has suffered more than any other part of the Cyprus Museum from ignorance, carelessness, and neglect. The majority of the objects have been unpacked into shallow glass-covered boxes without the least attempt to secure them to any labels which they may have possessed: moreover, of the few labels which survived in 1894, the majority are copies, not the original notes; at all events they are not in the handwriting of any known excavator or superintendent of excavations.[123]

One of the most useful broad studies to follow in the 20th century was *Jewellery in the Cyprus Museum*,[124] in which Angeliki Pierides presented an inventory of objects held by the Cyprus Archaeological Museum in Nicosia; her work included scholarly commentary and clear images that outlined the development of jewellery on Cyprus. The author provided a chronological discussion of the Late Cypriote period (*ca.* 1550–1050 BCE) and Cypro Geometric period (*ca.* 1050–700 BCE) and offered some insights into the influence of Aegean, Near Eastern, and Egyptian traditions on Cypriote adornment practices.

In the same period, Lena Åström created a catalogue of jewellery divided first by material, then subdivided by form.[125] While this catalogue is extensive, it deals with such a vast range of artefacts — in addition to jewellery — that it is difficult to navigate; the divisions are basic, and little detail is offered. Nonetheless, the book remains a useful contribution to our knowledge of Cypriote jewellery, and some scholars continue to cite Åström's classification system. Smaller contributions were made by Catling, who presented typologies for fibulae and pins in *Cypriote Bronzework in the Mycenaean World*,[126] and by experts on Aegean finger rings applying their expertise to Cypriote rings,[127] thereby demonstrating the influence of the Aegean, Egypt, and the Near East on Cypriote styles.

2.3.2 Recent Studies

New approaches to the analysis of jewellery and adornment practices have shifted to an exploration of the socio-political landscape on Cyprus during the Late Bronze Age–Early Iron Age. Analyses of jewellery thus aim to understand the control of and trade in exotic and precious goods, particularly metal objects.[128] Knapp, Muhly, and Muhly investigated the significance of metal hoards; they sought to distinguish between utilitarian and non-utilitarian deposits, and to categorise personal, mercantile, and founder's hoards.[129] These

[123] Myres and Ohnefalsch-Richter 1899, p. 35.
[124] Pierides 1971.
[125] Åström, L. 1967; 1972.
[126] Catling 1964. More recently, Giesen (2001) created a typology of Cypriote fibulae.
[127] Boardman 1970, and recently, Pini 2010.
[128] E.g., Gale and Stos-Gale 1984; Pare 2000; Sherratt, S. 1993; 2000; Waldbaum 1999.
[129] Knapp *et al.* 1988.

scholars concluded that (1) personal hoards contained the personal possessions of individuals; (2) merchant's hoards were identifiable by the presence of newly made and standardised material; and (3) founder's hoards were characterised by their high value, often in the form of broken objects and scrap metal.[130]

Object-specific studies are limited, one noteworthy exception being a typology of Cypriote fibulae by Katharina Giesen.[131] The paucity of Cypriote fibulae in the current dataset reflects the dating of most of them to a period before the Late Cypriote IIC destruction.[132] Later, in the 12th century, the practice of wearing fibulae as a clothing attachment spread to Cyprus at about the same time that the Naue II sword was introduced from the west.[133]

Since the 1980s, studies of Cypriote jewellery have formed a component of broader research programmes at specific sites, such as Amathus,[134] Hala Sultan Tekke,[135] Palaepaphos,[136] and Kalavasos-Ayios Dhimitrios.[137] Of these, Kalavasos-Ayios Dhimitrios possesses one of the richest assemblages from a closed context; this context was systematically excavated and the human remains osteologically analysed in order to determine sex and age.[138] Osteological analysis to determine gender can also counter modern bias in relation to adornment practices; for example, the analysis of remains from a Late Cypriote IIB grave at Lapithos in Cyprus indicates that a 48-year-old man was buried wearing hair spirals.[139] Previous publications on other sites had often neglected to report the position of artefacts on the body — or even whether there were skeletal remains at all — and seldom discussed the contexts from which the objects were recovered.[140] Tomb 11 at Kalavasos-Ayios Dhimitrios contained the remains of three adult women, one young child, and three newborn infants, and included goods of such quality and quantity that the wealth and foreign connections of the Late Bronze Age adults in the tomb is clear, although the evidence also suggests that metal jewellery was not buried with children on Cyprus.[141] Elizabeth Goring's examination of the material from Tomb 11 in Calinescu's *Ancient Jewelry and Archaeology*[142] indicates that many of the most prevalent jewellery classes of the Cypriote Bronze Age (that is, diadems, decorated earrings, pins, and mouth coverings) are missing from Tomb 11; Goring hypothesises that these absences can be attributed to individual, clan, or cultural differences in the region.[143] She also associates many of the jewellery pieces with the Cypriote weight standard

[130] Knapp *et al.* 1988, Table 1.
[131] Giesen 2001.
[132] Refer to Giesen 2001.
[133] Catling 1964, pp. 117–125.
[134] Laffineur 1992.
[135] Åström, P. 1983; Niklasson 1983; Samaes and Nys 2010.
[136] Goring 1983a.
[137] Goring 1996. In addition, it would be remiss not to acknowledge over 50 years worth of contributions by Vassos Karageorghis to scholarly research in Cyprus: these include, e.g., Karageorghis 1974; 1975; 1983; 1986; 1990; Karageorghis *et al.* 1976; Karageorghis and Demas 1984; 1985.
[138] Goring 1996, p. 27; South *et al.* (n.d.).
[139] Fischer 1986, p. 12.
[140] E.g., Maroni: see Manning *et al.* 1998, p. 348.
[141] Although one necklace of tiny green and blue faience beads was buried with a child at Enkomi level IV: see Schaeffer 1952, p. 135.
[142] Calinescu 1996.
[143] Goring 1996, p. 34.

of 10.8 grams,[144] linking Late Bronze Age Cypriote jewellery not only to its owners' status, but also to its use as currency.

The identity of the people for whom funerary goods were intended is central to understanding internal and regional relationships. As Priscilla Keswani notes, people on Cyprus during the Late Bronze Age–Early Iron Age developed a heightened need to define their identities at death.[145] Acts of display in mortuary behaviour thus become symbolic expressions of community identity.[146] In order to examine such mortuary behaviour, Goring technically appraised Cypriote jewellery in her PhD thesis,[147] but because her typology is limited to Cypriote goldwork, her findings apply mainly to elite adornment practices. Furthermore, while she categorises some types of jewellery according to their form (such as earrings and pins), other types are categorised according to their decoration (such as diadems and mouthpieces). Goring's extensive treatment of Cypriote jewellery discusses the evidence for usewear, and interprets female burial gifts as dowries buried with their owners.[148] The buried wealth suggests a continuation of the special status of these individuals — and presumably of their families — from life into death.

Goring and Keswani have both established that certain objects, such as diadems, mouthpieces, and other foil ornaments, had a funerary purpose, whereas many other categories of jewellery acted as status indicators, perhaps as symbols of social role or authority in daily life.[149] Keswani demonstrates that such differential displays of wealth in mortuary deposits would have served to demarcate status between groups and individuals. The status of the deceased and/or the surviving family might be enhanced, for instance, by placing Aegean, Egyptian or Near Eastern objects or motifs in burials to serve as symbolic indicators of the deceased's status.[150] Furthermore, luxury goods such as gold jewellery, as well as artefacts made of silver, faience, and ivory, also played a role in the establishment of cross-cultural relationships that intensified from the 12th century BCE onward.[151]

Lindy Crewe is the third scholar of note, along with Goring and Keswani, to have made a significant contribution to the study of Cypriote jewellery.[152] The mortuary material excavated by the British Museum was re-examined by Crewe in order to supplement the available data and recontextualise the finds within current scholarship. Her results were an important contribution to the British Museum's online Enkomi project, and her study of British Tomb 66 highlights the value of reinterpreting tombs and their material. Other than the studies mentioned above, the topic of Cypriote jewellery has been conspicuously neglected, despite the wealth of material.

[144] Swantek 2006, pp. 33–34.
[145] Keswani 2004, p. 1.
[146] Bloch-Smith 2002, p. 121. On how this framework was used to examine Iron Age sites across Cyprus, see Janes 2013.
[147] Goring 1983b.
[148] Goring 1989, p. 103. See also Goring 1983a; 1983b; 1996.
[149] Goring 1989, p. 103; Keswani 2004, p. 138. Refer also to Lagarce and Lagarce 1986, pp. 117–122.
[150] Keswani 2005, p. 342; Konstantinidi 2001, pp. 223, 236; Poldrugo 2002.
[151] Keswani 2004, pp. 126–127. On the introduction of these luxury materials from Late Cypriote II, see Matthäus 1982; 1985.
[152] Crewe 2009; Crewe *et al.* 2009.

In summary, the review of early and recent studies of jewellery from the southern Levant, the Aegean, and Cyprus reveals an absence of research that (1) analyses in equal measure the influence of the Aegean and Cyprus on the jewellery of the southern Levant during the Iron Age I–IIA; (2) ranges widely rather than being focused on just one site; (3) assesses all categories of personal adornment; and (4) includes all metals from which personal adornments were made.

CHAPTER 3

SOURCES OF EVIDENCE

This regional site survey summarises the archaeological evidence from the five geographic regions and 29 sites selected for study. These particular sites were selected because they all have documented Late Bronze Age–Early Iron Age metal jewellery in settlement or mortuary contexts that reveal regional, chronological, or stylistic patterns.[1] In some cases, it is possible to distinguish the local traits or external influences represented in th-e different metal jewellery subtypes. Associated artefacts also provide important information in the interpretation and understanding of these artefacts. I organise the discussion of each site as follows: (1) *location*; (2) *context*; (3) *material*; and (4) *jewellery*. The details for the objects from each site that are included within the dataset are provided within Appendix B. Additional details for each object can be found online in Catalogues A and B within Appendix C.

The following two maps show the locations of the 29 sites discussed below:

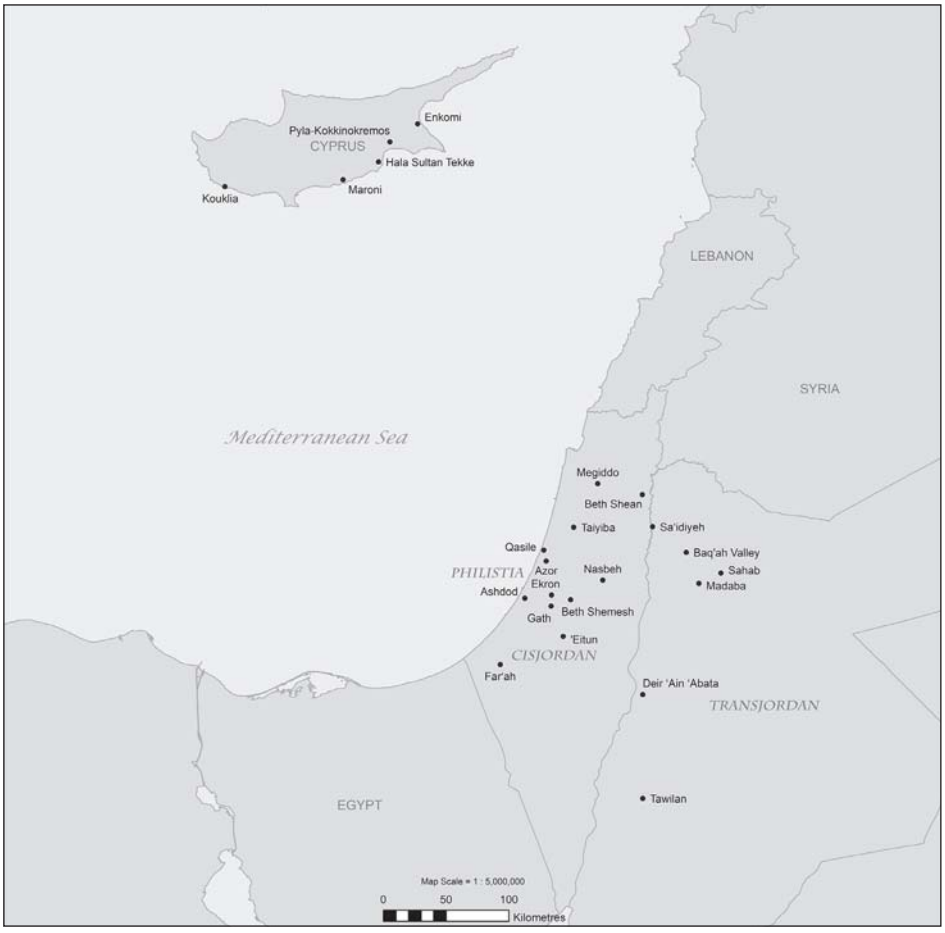

Fig. 2. Sites in the dataset: Cyprus and the southern Levant

[1] For chronological details for all burials and loci at each site, see Tables D.5–D.9, Appendix D.

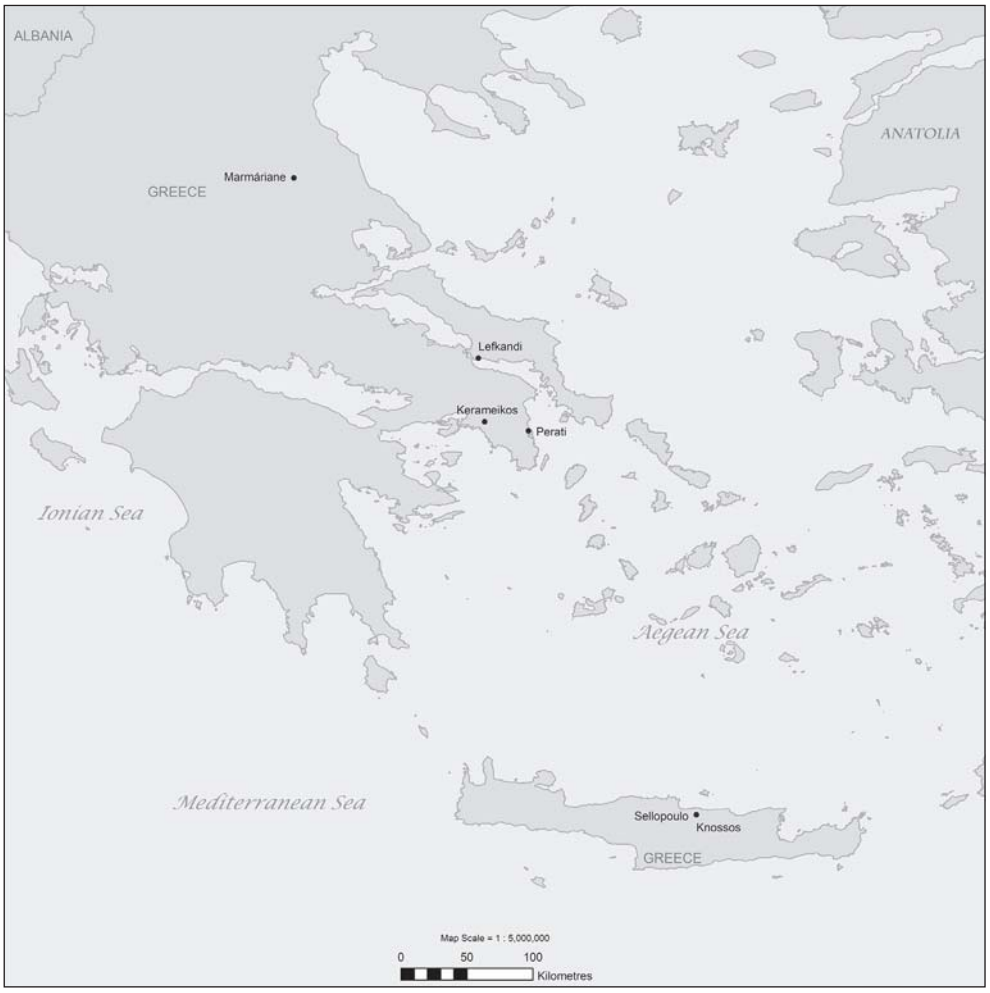

Fig. 3. Sites in the dataset: the Aegean

3.1 REGIONAL SITE SURVEY: PHILISTIA

Five sites located in the southern coastal plain are summarised below in alphabetical order: Ashdod, Azor, Ekron, Gath, and Qasile.[2]

3.1.1 ASHDOD

Location: Ashdod is located near the Mediterranean coast, six kilometres south of modern Ashdod. In antiquity, Ashdod served as a major Philistine port situated along the Via Maris. The tell consists of a lower city of about 28 hectares and an acropolis of approximately eight hectares.

[2] As much of the material from Early Iron Age Philistia remains unpublished, these sites are selected on the quantity of published material and/or the ability to access unpublished material: refer to Section 1.1.1.

Context: Excavations at this site were instrumental in linking the Philistines to the Aegean. The majority of Late Bronze Age and Early Iron Age material was recovered from three areas: Areas G, H, and K.[3] According to the excavators, the earliest Iron Age contexts commence with Stratum XIII (dated to the early 12th century BCE); this overlies the destruction layer of the Late Bronze Age city in Stratum XIV, and includes a residential complex confirming the city's occupation by prosperous residents.[4] A re-examination of the Iron Age sequence at Ashdod indicates that the remainder of the Iron Age I is represented by Strata XII and XI; Stratum X corresponds to the late 11th and early 10th centuries, associated with the Iron Age I/IIA, and is followed by the 10th to ninth century Stratum IX.[5]

Material: Iron Age *Ashdoda* figurines combining Aegean, Cypriote, and Canaanite elements were first found in Area H, Stratum XI.[6] Philistine I ceramics occur from the earliest Early Iron Age levels in Stratum XIII into Stratum XII, where Philistine II ware dominates.[7] Red-slipped burnished ware, also known as Late Philistine Decorated Ware (formerly known as Ashdod Ware), appears in Stratum X — the transition between Iron Age I and II. Philistine decorative motifs, including birds, fish, and geometric designs, are associated with Strata XIII and XII in Areas G and H.[8] Cultic buildings in both Areas G and H, Strata XIII–XII, contained Philistine vessels, scarabs, beads, assorted ivory objects, gold and faience jewellery, and two gold leaf dagger pommels decorated in a style 'reminiscent of Mycenaean metalsmiths.'[9] Objects with Aegean or Cypriote attributes also include several spool-shaped loomweights found in Area G, Stratum XIII,[10] and a bathtub from Area G, Stratum XII, that is similar to examples from Ashkelon, Ekron, and Enkomi.[11]

Jewellery: The jewellery assemblage at Ashdod manifests a typical array of Levantine traits with Egyptian features.[12] This array of traits is demonstrated in the club-like hourglass ivory pendants, and bone and ivory mallet pendants common in the Levant,[13] cowrie shells that demonstrate links with the Red Sea,[14] and common Egyptian faience amulets, in particular Bastet and Heart pendants. These objects indicate a preference for non-labour-intensive materials and forms. Metal jewellery is extremely limited, with only seven pieces from Area H, Strata XIII–X. Of these pieces, a gold pomegranate bead (no. 1) is a common motif

[3] Dothan, M. 1971; 1993b; Dothan and Ben-Shlomo 2005; Dothan and Porath 1982; 1993. See also Ben-Shlomo 2003, pp. 85–87.

[4] Dothan and Ben-Shlomo 2005, p. 3.

[5] Ben-Shlomo 2003.

[6] Ben-Shlomo and Press 2009, p. 3. On their combined characteristics, refer to Russell 2009.

[7] Philistine I was formerly known as Mycenaean IIIC (Myc IIIC), *Sea Peoples*' Monochrome (SPM), or Philistine Monochrome. This class of pottery is related to Late Helladic IIIC pottery and is decorated in monochrome paint, or (in some instances) is left undecorated. Philistine II (formerly known as Philistine Bichrome or BPh) is derived from the Philistine I style, and includes many Canaanite, Cypriote, and Egyptian features, usually (but not always) decorated in bichrome paint.

[8] Dothan, M. 1971, pp. 5–7; Dothan and Porath 1982, pp. 96–98; Dothan and Zuckerman 2004.

[9] Dothan, M. and T. Dothan 1992, p. 153; Dothan, T. 2003.

[10] Dothan, M. and Porath 1993, fig. 24:3–5; Yasur-Landau 2011a.

[11] E.g., Dothan, T. 2003, pp. 204–207; Karageorghis 1998a, pp. 280–281.

[12] Golani and Ben-Shlomo 2005.

[13] Golani 2012.

[14] Verduci 2014.

in the southern Levant, although it is occasionally seen elsewhere in the eastern Mediterranean.[15] Also of interest is a toggle pin of copper alloy (no. 3), a rare example of this form of Near Eastern clothing attachment in Philistia.

3.1.2 Azor

Location: The graves at coastal Azor are dug into sand about six kilometres southwest of Tel Aviv, along the route to Jerusalem.[16] The archaeological remains spread out over an area encompassing the modern towns of Azor and Holon in a densely populated region.

Context: Excavations at Azor revealed at least 50 burials with evidence of continued Late Bronze Age customs and elements of Philistine culture.[17] Those burials the excavators date to the Early Iron Age and that also contained metal jewellery are tombs 56, 58, 63 and 79 in Area D, and according to the Israel Antiquities Authority, tombs 8, 42, and 49 as well.[18] Burial traditions vary widely, and include Iron Age I–II pit burials and cremation burials;[19] the latter type can be compared to Aegean and Cypriote funerary traditions,[20] although even in the Aegean cremation burials were sporadic until the Submycenaean period.[21] Given the scarcity of burials in Philistia, these burials at Azor offer valuable information on Early Iron Age funerary traditions — specifically, the manner in which people in the southern coastal plain adorned their dead.

Material: Philistine pottery forms found in Iron Age I burials at Azor are comparable to those forms from Qasile XII and XI (mainly bowls, kraters, closed vessels, and *feeding bottles*),[22] whereas burials that date from the Iron Age II contain red-slipped Cypro-Phoenician juglets. These latter ceramics are distinctly different from Late Philistine Decorated Ware (as discussed under 'Ashdod'), and it is unclear whether Philistia or Phoenicia was the source of their inspiration.[23] Of special interest are the bell-shaped kraters with an attached 'cup' that may once have held terracotta mourning figurines similar to ones found at Enkomi.[24] Amongst the skeletal remains are males with *brachycephalic* (or short-headed) skull types allegedly belonging to foreign persons, although it should be noted that the preliminary report on the skeletal material is incomplete.[25] Within cremation burial D63, a stone structure surrounding an upright jar (comparable to cremations with similar structures in Early

[15] Dothan, T. and Ben-Shlomo 2007. See also Artzy (1991) and Ward (2003) in relation to the Late Bronze Age.
[16] Hägg 1987.
[17] Dothan, M. 1960; 1961; 1993a.
[18] Refer to Catalogue A.
[19] Ben-Shlomo 2008, p. 46.
[20] Cf. cremations at, e.g., Akhzib, Atlit, Far'ah, Jericho, Lachish, and Megiddo: Bloch-Smith 1992, pp. 177–178, 210–214.
[21] Coldstream 2003.
[22] Ben-Shlomo 2008, p. 46.
[23] Ben-Shlomo *et al.* 2004.
[24] Refer to Ben-Shlomo 2008.
[25] Ben-Shlomo 2008, p. 50. Regarding the *brachicephalic* phenotype, see Harper (2008) and Harper and Fox (2008).

Iron Age Torone in northern Greece), were the remains of an adult male and adolescent male found in association with a bronze bowl. This 11th century burial represents the earliest recorded cremation burial from Philistia.[26] Additional finds include a bi-metallic knife with known cultic connotations from Tomb 79, along with two scarabs and a complete chalice.[27] Apart from the cremation burials, the cemetery at Azor bears a certain similarity to that of Iron Age I Sa'idiyeh, where a *Sea Peoples* presence is suggested,[28] although it may be that both sites simply reflect typical Canaanite attributes.[29]

Jewellery: Amongst the limited metal jewellery corpus found at Azor (eight units in total) is a bronze fibula, an object with clear Aegean antecedents,[30] alongside a decorative bangle (no. 13) and a unique incised sheet metal pendant (no. 14) — both lacking known parallels. A gold mouthpiece (no. 10) from Tomb D63 is reminiscent of Cypriote burial traditions. In Tomb D56, the remains of a child (aged seven or eight) wore an Egyptian scarab at the throat. The remains were also associated with an iron bangle (no. 15), which at the time of excavation was one of the earliest examples of a bangle made of this metal.[31] Another pit burial, D58, contained the remains of a female and child along with a copper alloy bangle with flared terminals (no. 10) that might be compared to Bronze Age Aegean types.[32] Despite the small size of the assemblage at Azor, the jewellery reflects local, foreign, and unique features, although it seems there is no clear correlation between the cultural material and the cultural origin of the deceased.

3.1.3 Ekron

Location: Positioned at the border of the Judean Shephelah and Philistia, Ekron is the northernmost and furthest-inland member of the Philistine Pentapolis. The site is comprised of 16 hectares of lower tell and four hectares of upper tell.[33] Ekron is 20 kilometres from the Mediterranean coast and lies at the junction of the Philistine Coastal Plain and the Inner Coastal Plain in what was once a frontier zone for commercial networks.

Context: At present, the results of the excavations at Ekron contain the largest body of data relating to the Philistine Early Iron Age from any one site.[34] According to the excavators, Stratum VII is associated with the initial settlement by the *Sea Peoples* in the early 12th century BCE. By Stratum IV, dated to the second half and end of the 10th century (or Iron Age I/IIA), Philistine culture at Ekron incorporated many Phoenician and Egyptian

[26] The majority of cremation burials date from the middle of the 10th to the beginning of the seventh centuries BCE: Bloch-Smith 1992, p. 138.
[27] Dothan, T. 2002; Ben-Shlomo 2008.
[28] Pritchard 1968; Tubb 1988b.
[29] Ben-Shlomo 2008, p. 49.
[30] Desborough 1964, pp. 54–58.
[31] See Dothan, M. 1961, pp. 171–172.
[32] Dimakopoulou 1998, fig. 66.
[33] On the identification of the site as biblical Ekron, see Naveh 1958.
[34] Many thanks are owed to Seymour Gitin who allowed me access to the as yet unpublished chapter on the Iron Age I jewellery of Field IV. See also Ben-Shlomo 2006a and Brandl 1998a.

features. Stratum III represents the remainder of the Iron Age IIA. The settlement suffered destruction at the end of the Late Bronze Age, and the Philistines established a large fortified city with a mudbrick city wall and glacis upon the ruins. Philistine I pottery was first identified in Stratum VII in Field I, overlying the destruction layer in an industrial and cultic area that served as a citadel with a large public building in the Iron Age II.[35] Additional Stratum VII material was found in Field X, a domestic area.[36] Field III contained monumental architecture in Strata VI–V and an industrial installation in Stratum IV, while a residential area, hearth sanctuaries, and large public buildings were found in the central area of Field IV, an area occupied throughout the Iron Age.

Material: The main distinguishing feature in Stratum VII is the appearance of large quantities of local Philistine I and II ware. Additional material with Aegean and Cypriote attributes includes bathtubs in Field I (Stratum VII) and Field IV (Stratum VI), similar to examples from Ashdod, Ashkelon, and Enkomi,[37] a ceramic hedgehog found in Field X,[38] a bi-metallic knife,[39] an incised scapula,[40] and lion-head rhyta comparable to one from Gath[41] (all from Stratum V), as well as spool-shaped loomweights from Field X (Stratum VIIB) and Field IV (Stratum V).[42] One of the best examples of an Aegean style of craftsmanship is the ivory lid of a pyxis depicting a griffin, a lion, and two bulls from Field IV that was found between two structures dating to Strata V and VI.[43] Another distinctive feature demonstrating an Aegean and Cypriote influence (and also found at Gath) are the round-pebbled hearths from Strata VII–V in Fields III and IV.[44] Phoenician influence by the second half of the 11th century is reflected in the dominance of burnished red slip ware.[45] Apart from a large assemblage of Philistine pottery, significant finds from Field IV include intra-mural infant burials in Strata VII–V, along with increasingly abundant pig remains indicating a dietary preference paralleled at other Philistine sites.[46]

Jewellery: The majority of jewellery discovered at Ekron comes from Field IV.[47] Amongst these items was an Egyptian jewellery cache, two silver hoards, and one hoard of silver ingots. Field IV Lower yielded 115 items of jewellery that Golani dates to Iron Age I,[48] and 477 that he dates to Iron Age II.[49] The 31 metal jewellery pieces in the dataset occur in a range of materials and artistry, from plain copper alloy rings (for example, no. 95) to silver-plated,

[35] Dothan, T. and Ben-Shlomo 2013, p. 31.
[36] Bierling 1998.
[37] E.g., Dothan, T. 2003, pp. 204–207; Karageorghis 1998a, pp. 280–281.
[38] Dothan, T. 2003, pp. 204–208.
[39] Dothan, T. 1989. Cf. Brug 1985, p. 170.
[40] Dothan, T. 2003, p. 208.
[41] Dothan, T. 2003. See also Maeir and Ehrlich 2001, p. 29; Maeir 2006.
[42] Bierling 1998, pl. 7b; Dothan, M. and Porath 1993; Yasur-Landau 2011a.
[43] Dothan, T. 1997, p. 102.
[44] Dothan, T. 2003, pp. 199–200. On their Cypriote origin, refer to Maeir *et al.* 2013, p. 7.
[45] Dothan, T. 1997.
[46] Lev-Tov 2006. See also Hesse 1990; Hesse and Wapnish 1997.
[47] Golani 1996, p. 17.
[48] There is no mention of the types of 'Egyptian style amulet pendants': Golani (forthcoming-a). This number does not include six Egyptian style amulet pendants, or the other 12 (seven of which are Hathor pendants) from strata VI–IV and IV–IC.
[49] Golani (forthcoming-b).

decoratively incised rings (nos. 101–102) that reflect a Hittite influence. [50] There are also gold double-spiral rings (no. 115) with Aegean and central European parallels,[51] and a gold pomegranate pendant (no. 93) and copper alloy toggle pin (no. 107) representative of local traditions. A scarab of Egyptian Blue mounted within a gold swivel bezel with a gold shank (no. 98) is suggestive of the Egyptian influence that lingered in the southern Levant in the Early Iron Age.[52]

3.1.4 Gath

Location: Gath is situated on the eastern edge of the Philistine coastal plain where it adjoins the outer edge of the Judean Shephelah and rises above the Wadi Elah. Gath is on the crossroads of a major route between Egypt and Syria, and a local route leading east through the Elah Valley and then up the Husan ridge towards Bethlehem and Jerusalem. Given its strategic position, it would have played an important role in commerce between the coastal plain and hill country.[53]

Context: Twentieth century investigation of the Philistine layers at this site were the direct result of the discovery of Mycenaean-style pottery at Gath in 1899 by Bliss and Macalister.[54] The limited number of Mycenaean sherds found at that time meant a cautious attempt was made to link the Mycenaeans with the Philistines.[55] Ongoing excavations across the site in Areas A, D, E, and F continue to reveal Early Iron Age strata containing Philistine material culture.[56] A ninth-century destruction level often precedes Early Iron Age contexts.[57] According to the excavators, Stratum A7 in Area A is defined as Late Bronze Age (late 13th–very early 12th century BCE), Stratum A6 is Iron Age IA (early 12th–early 11th century BCE), A5 is Iron Age IB (early 11th–early 10th century BCE), A4 dates to the late Iron Age I–early Iron Age IIA (early 10th–early 9th century BCE), and Stratum A3 corresponds to the destruction level in late Iron Age IIA (mid–late 9th century BCE). The destruction level in Area D is Stratum D2. In Area E, the Iron Age I is associated with Stratum E3, and Iron Age IIA is associated with Stratum E2. In addition, a multiple burial cave (Tomb 1) was excavated in Area T in 2006. The burial here of 70 adults and subadults contributes greatly to our (still limited) understanding of late Iron Age I to Iron Age IIA burial practices in Philistia.[58]

[50] Golani 1996, p. 45; Thompson 2009, p. 607; Singer 1993.
[51] For discussion and bibliography, see Verduci 2014.
[52] Brandl 1998, pp. 53–54.
[53] Schniedewind 1998, p. 70.
[54] Bliss and Macalister were investigating Petrie's identification of Safi as the Philistine city of Gath: Bliss and Macalister 1902, pp. 89–96; Dothan, M. and T. Dothan 1992, pp. 30–31; Schniedewind 1998, p. 75. For a summary of the earliest investigations at Gath, see also Maeir 2012, pp. 100–102.
[55] Bliss and Macalister 1902, pl. 35:7–8 and 35:11.
[56] Hitchcock and Maeir 2013.
[57] Maeir 2012.
[58] Faerman *et al.* 2011; Verduci forthcoming A.

Material: The material assemblage at Gath is comparable to assemblages at Ashdod, Ekron, and Qasile, and thus one might expect there to be a regional similarity between the metal jewellery assemblages at these sites. Decorative motifs include birds, antithetic spirals, and banded Late Philistine Decorated Ware. Ceramics such as a Philistine I krater from Area E and a Philistine III deep bowl from Area A combine both Aegean and Canaanite elements.[59] Additionally, foreign influences can be seen in (1) a conoid seal from Tomb 1 whose design is suggestive of Aegean seal practices,[60] (2) a horned altar from Area D found in association with a textile production area in the ninth-century destruction level, comparable to horned altars discovered at Ashkelon and the Aegean, as well as horned altars associated with various industrial areas at Ekron and at Myrtou-Pighades in Cyprus,[61] (3) an Iron Age IIA notched scapula found in a corner installation in the ninth-century Stratum A3 destruction level in Area A, an object associated with Cypriote cultic practices and a feature of other Philistine sites in Iron Age I,[62] (4) a *Tonna galea* (Giant Tun) shell from Area A (Stratum D2), an object linked to Aegean and Cypriote ritual traditions,[63] and (5) a bi-metallic knife, a type also found at Azor, Ekron, and Qasile.[64]

Jewellery: Very limited quantities of Early Iron Age metal jewellery have been recovered from occupational contexts in Area A at Gath, but Tomb 1 in Area T yielded 219 jewellery pieces, 69 of which were of metal.[65] The evidence suggests that children here were buried with metal jewellery, a practice familiar at Sa'idiyeh, Far'ah, and Azor. Despite their simplicity of form, the objects from Tomb 1 include 31 bangles of iron. Given that iron may very well have been linked to elite adornment practices,[66] the deposition of so many iron artefacts in this tomb is curious given the apparently poor health of the deceased.[67] A non-local tradition is indicated by the presence of a flared bangle fragment of copper alloy (no. 31) similar to one from Azor (no. 10). Also unusual are two fibula bow fragments (nos. 5 and 48). Although fibulae are a tradition thought to have been introduced from the Aegean, few published examples come from Philistia. Jewellery in precious metals mainly derives from settlement contexts, differentiating their owners from the occupants of the multiple burials in Tomb 1.[68]

3.1.5 Qasile

Location: Qasile is located on the coast of Israel at the mouth of the Yarkon River. It lies within the modern city of Tel Aviv and on the grounds of the Eretz Israel Museum. Originally,

[59] Hitchcock and Maeir 2013, p. 61.
[60] Faerman *et al.* 2011, p. 33; Maeir *et al.* 2013, p. 14.
[61] Hitchcock 2002; Hitchcock and Maeir 2013.
[62] Zukerman *et al.* 2007.
[63] For a synthesis of all of these examples, refer to Hitchcock *et al.* 2014.
[64] Maeir 2013, p. 213.
[65] Faerman *et al.* 2011; Verduci forthcoming A. The large quantity of jewellery from this Early Iron Age Philistine site contributes significantly to what we know of Philistine cultural identity and is reviewed as a case study in Chapter 6.
[66] Green 2006, p. 164.
[67] Faerman 2012.
[68] Verduci forthcoming A.

the site would have covered an area of approximately 1.6 hectares. Qasile's location alongside the river and near the coastline no doubt guaranteed Qasile's interaction with its Mediterranean neighbours.

Context: The Iron Age I at Qasile dates from the mid-12th century to the beginning of the 10th, divided by the excavators into Strata XIII–X. Investigations at Qasile revealed three Philistine temples built in Area C.[69] A small Stratum XII temple (Temple 319) was associated with Philistine ware. On the ruins of this temple lay a Stratum XI temple (Temple 200) containing material displaying Aegean and Cypriote affinities.[70] The subsequent Stratum X temple (Temple 131) had been destroyed, presumably as the result of an earthquake that destroyed other sites in the southern Levant,[71] although scholars also argue this occurred around 980 BCE at the time of the conquest of King David as recorded in the biblical narrative.[72] There was also a small shrine, Temple 300, in Strata XI–X that continued to function in both Stratum IX, dated to the first half of the 10th century, and Stratum VIII, dated to the second half of the 10th century and the beginning of the ninth.

Material: Objects with Aegean or Cypriote parallels include ceramic wares, such as a pyxis, and a bi-metallic knife with an ivory handle, both from Stratum XII. A contemporaneous bi-metallic knife comes from Tomb 562 at Far'ah.[73] Stratum XII and XI each yielded a *Charonio tritonas seguenza* (Triton) shell, an object known from Minoan and Mycenaean cultic contexts.[74] The Stratum X Temple 131 held a socketed bronze axe/adze whose type is rare in the Near East, although it has Aegean and Cypriote prototypes, [75] and two pomegranate-shaped ceramic vessels similar to forms from New Kingdom Egypt, Late Cypriote II–III Cyprus, Late Bronze Age (or possibly Iron Age I) Shera', and Stratum XI Ashdod.[76] In addition, one faience seal attributed to Stratum VIII depicts a chariot scene that can be associated with Cypriote glyptic art.[77]

Jewellery: Temple 200 in Stratum XI was plundered, but contained 809 ring-shaped faience beads similar to those commonly found in Levantine Late Bronze Age and Iron Age contexts,[78] and a biconical carnelian bead also common during both periods.[79] Amongst the metal jewellery in Temple 131 was an iron bangle (no. 128) of a type known from other Early Iron Age sites and which is one of most common types of iron object from the Levant during the 12th to 11th centuries, when it first appears at Far'ah.[80] Nonetheless, this bangle

[69] Mazar 1974; 1980; 1985a; 1986.
[70] Mazar 1974. Cf. Hitchcock *et al.* 2014.
[71] Kempinski 1989, p. 89; Mazar, A. 2007.
[72] E.g., Maisler 1986, p. 71.
[73] Petrie 1930, pl. 21:96.
[74] Mazar 1980, p. 116. Cf. Brug 1985, p. 170.
[75] Mazar 1985a, pp. 3–10.
[76] Mazar 1980, p. 116.
[77] Mazar 1985a, p. 20.
[78] Hamilton 1934, N.395; Kertes 1974, p. 49, pl. 22; Lamon and Shipton 1939, pl. 91:36; Tufnell *et al.* 1940, pl. 34:1–2.
[79] Iron Age I Tomb 66 and Late Bronze Age II Tomb 27, Beth Shean: Oren 1973, figs. 42:38 and 38:15.
[80] Waldbaum 1978, pp. 24–27. A similar bracelet comes from Ialissos: see Snodgrass 1971, pp. 221, 229, and n. 11.

remains one of the earlier examples of iron jewellery in the southern Levant. This bangle is also unique in that it is not a burial gift, but rather an offering to the temple in which it was found.[81] Amongst the finds (although its context is unknown) was also an unpublished fibula fragment (no. 129). The metal jewellery from this site is extremely limited (5 units) and does not reflect the wealth implied by other finds, perhaps because there was little connection between ritual and jewellery offerings in Early Iron Age Philistia, despite the presence of bangle no. 128.

3.2 REGIONAL SITE SURVEY: CISJORDAN

The seven sites selected from the area west of the Jordan River (excluding Philistia) are described below in alphabetical order: Beth Shean, Beth Shemesh, 'Eitun, Far'ah, Megiddo, Nasbeh, and Taiyiba.

3.2.1 Beth Shean

Location: Beth Shean covers an area of *ca.* four hectares at the base of a hill above the Beth Shean Valley, with a history of settlement from the Late Neolithic.[82] Despite its relatively small size, Beth Shean is strategically located. The site controlled the junction of the Jezreel and Jordan River valleys, a segment of the international highway that connected Cis- and Transjordan, and that intersected the north-south thoroughfare along the Jordan Valley.

Context: Investigations between 1921 and 1933 revealed material in Strata VI and V that the excavators dated to Early Iron Age. Numerous concerns regarding the stratigraphy and chronology of these early excavations remain unresolved.[83] More recently, excavations have revealed Early Iron Age levels in Areas P and S.[84] Stratum VI as defined by the earlier excavators is equivalent to Strata S-4 and S-3 as defined by the later excavators. S-3 was destroyed by fire, ending the Egyptian garrison at the site. Stratum S-2 corresponds to the latter part of the Iron Age I (Stratum V) dated to the 11th century BCE, while S-1 corresponds to Iron Age IIA in the 10th to ninth centuries. A number of Iron Age I hoards (1, 2, A, B, and C) were discovered in Strata VI, V, and S-4. Excavation of the Northern Cemetery on the northern bank of the Harod River also revealed more than 200 burial caves dated to various periods; of these burial caves, Tombs 60, 66, 69, 202 and 227 encompass the Early Iron Age.[85]

[81] Mazar 1985a, p. 9.
[82] Mazar 1997a, p. 62.
[83] James 1966; Oren 1973.
[84] See, e.g., Mazar 1992; 1994; 1997a; Panitz-Cohen and Mazar 2009.
[85] Tombs 90, 107, 219, and 221 also contained objects assigned to the Late Bronze Age and Iron Age I by Oren (1973, p. 130). Cf. Bloch-Smith 1992, p. 164. Tomb 7 is listed as Iron Age I but it also contains Early Bronze IV remains: Oren 1973, pp. 6, 130.

Material: The most significant Egyptian material excavated from Beth Shean dates from the Late Bronze Age and Iron Age I.[86] During this era, Beth Shean served as the heart of Egyptian jurisdiction in northern Canaan, as demonstrated by the presence of governors' residences, temples, and the living-quarters of the military and associated functionaries in the garrison. The most significant finds are three inscribed monumental basalt stelae dating to the reign of Seti I and Ramses II, along with a life-size statue of Ramses III, in addition to numerous other Egyptian stelae and inscriptions. Amongst the Iron Age I finds from Level VI is a Cypriote bronze tripod[87] — a style that flourished during the 13th to 11th centuries BCE, but which peaked in the 12th century. A scaraboid dated to Stratum IV (or possibly to an earlier stratum according to Yasur-Landau)[88] depicts a man with a spiked hairdo or headdress reminiscent of depictions of the *Sea Peoples* in the Medinet Habu reliefs.[89] Other objects displaying Aegean and Cypriote attributes include Mycenean IIIC pottery sherds and spool-shaped loomweights, although these objects date from the Late Bronze Age and are arguably evidence of early Aegean mercenaries at the site.[90] The foreign influences present at this early date at Beth Shean are perplexing and poorly understood; as Yasur-Landau notes, 'their presence in the outpost of Beth Shean raises many difficult questions.'[91] Material from the burials includes nearly 50 clay anthropoid sarcophagi dating to the period of Egyptian imperial rule. Only Tombs 60, 66, and 202 contained metal jewellery.

Jewellery: The jewellery from Beth Shean reflects continuing trends in Canaanite and Egyptian material culture during the Late Bronze Age, such as small faience rings, a silver stirrup ring with an ovoid bezel, carnelian lotus seed pendants, and a gold triangular plaque pendant.[92] Perhaps the most distinctive example of interregional connections amongst the metal jewellery is a stirrup ring with an inscription in Luwian hieroglyphs (no. 139), whose closest parallels come from Late Bronze Age Nami and Syria.[93] Silver and gold were found together in Hoards 1 and 2 from Area S, and from Hoards A, B, and C.[94] This association between silver and gold is regularly seen in Late Bronze Age and Iron Age I Cisjordan, but declines by the end of the 11th century.[95]

3.2.2 Beth Shemesh

Location: The seven-acre tell of Beth Shemesh is located in the northeast Shephelah at the eastern edge of the Sorek Valley, about 20 kilometres west of Jerusalem, and is situated

[86] Fitzgerald 1930; Rowe 1930; 1940.
[87] James 1966, p. 28.
[88] Yasur-Landau 2010, p. 210. See Verduci (2013) for similar depictions found across the eastern Mediterranean.
[89] Verduci 2013.
[90] James and McGovern 1993, fig. 105:8 and 105:11.
[91] For further evidence of Late Bronze Age Aegean influences and material at Beth Shean, see Yasur-Landau 2010, pp. 207–214.
[92] Golani 2009.
[93] Refer to Singer 1993.
[94] Rowe 1940, pp. 19, 26, pls. 29:12–44, 34:17, 34:21, 66a.3, and 67a:1–3. See also Mazar 1993, pp. 217, 219–220; 1997a, pp. 71–72; and Thompson 2009.
[95] Thompson 2007, p. 93.

on the periphery of both Gath and Ekron.[96] The site lies at the eastern boundary of Philistia in the northern Shephelah during the Early Iron Age.

Context: Early 20th century interpretations of Philistine material discovered at the site were influenced by the opposing biases of the two earliest excavators at Beth Shemesh.[97] On the one hand, MacKenzie strongly advocated the theory of Philistine dominance at Beth Shemesh as reflected by the Iron Age I material in Stratum III, while on the other, Grant argued for Canaanite continuity in the region. The preceding Stratum IV (or sub-Stratum III) appears to represent the Late Bronze Age–Early Iron Age transition. In the later portion of Stratum IV (VIb), a hoard of jewellery was found in jug I.5913. Although the hoard was assigned a late 13th century date by the excavators, Tadmor compares some of the objects to finds from Tomb 934 at Far'ah and others from Megiddo that are dated to the 12th century BCE. Given the questionable nature of the hoard's excavation[98] and based on comparison with the material at Far'ah, the hoard is assigned to the Late Bronze Age–Early Iron Age transition.[99] One of the cave tombs excavated in the Northwest Necropolis (Tomb I) was dated by Mackenzie as late 10th to ninth centuries BCE;[100] however, the presence of Philistine ware in the tomb indicates that it should be assigned an Iron Age I date.[101] Since 1990, the aim of archaeological excavations at Beth Shemesh has been to excavate unexplored portions of the site in order to reinterpret the finds.[102] These excavations have revealed an extensive Iron Age I sequence in Areas A and D, assessed by the excavators as spanning the 12th to 10th centuries BCE in Levels 7–4. Level 3, in which Philistine wares are absent, represents the Iron Age IIA. Scholars now argue that the data reflects cultural continuity from the Late Bronze Age into the Iron Age and resistance to Philistine culture.

Material: Recent excavations indicate that the site lacks any locally-produced Philistine I pottery. The proportion of Aegean-style pottery at the site is approximately 5 per cent or less of the total pottery across the site, consistent with the proportion found at other sites on the periphery of Philistia, as compared to a proportion of 31 per cent to 47 per cent at Philistine sites.[103] Although Philistine cooking jugs are attested, these finds are thought to reflect the diffusion of Philistine traditions through social and commercial relations, and these jugs are not associated with other elements of Philistine material culture or tradition; for instance, there is no evidence of pork consumption, cylindrical loomweights, figurines, or seals.[104] The excavators argue that the local population rejected Philistine material culture in a deliberate attempt to emphasise their cultural distinction through a boundary maintenance strategy in this contact zone.[105]

[96] In the biblical narrative, the ark was returned to the Philistines at this site: 1 Kings 4:9.
[97] Grant 1931; 1932; 1934; Grant and Wright 1938; 1939, pp. 12, 57–58, 60, 127; Mackenzie 1912–1913.
[98] Tadmor and Misch-Brandl 1980, p. 73.
[99] Tadmor and Misch-Brandl 1980, p. 71.
[100] Mackenzie 1912–1913.
[101] Refer to Bunimovitz and Lederman 2011, p. 42.
[102] Bunimovitz and Lederman 2011.
[103] At smaller Philistine sites, such as Timnah and Qasile, the percentages are still high — 34 per cent and 24 per cent respectively: refer to Bunimovitz and Lederman 2011, p. 42, figs. 5–7.
[104] For discussion and bibliography, see Bunimovitz and Lederman 2011.
[105] Bunimovitz and Lederman 2011, pp. 46–47.

Jewellery: The dataset does not reflect the quantity of jewellery recovered from Beth Shemesh.[106] The large hoard found within the Late Bronze Age–Early Iron Age jug (I.5913) in Stratum IV demonstrates Levantine and Egyptian characteristics. Of special interest in the hoard are three flowerbud pendant earrings (nos. 200–202).[107] Their similarity to examples from Far'ah and Deir el-Balah may indicate that they are prototypes for the stylistically significant bud-like and tassel earrings that appear in the Iron Age I proper. Metal jewellery dating to the Iron Age I is predominantly from Tomb I, and consists mainly of metal bangles.[108] Despite an absence of other Aegean or Cypriote forms, the site yielded three fibulae (nos. 207–208).

3.2.3 'Eitun

Location: 'Eitun lies in a valley on the southwestern part of the Judean Shephelah, just below the Hebron hills, about 18 kilometres southwest of Hebron and 4.5 kilometres northeast of Beit Mirsim. The site is located in an open area with few settlements nearby, and is relatively distant from any major Early Iron Age centres.

Context: In 1967, salvage excavations by the Israel Department of Antiquities following the Six-Day War unearthed Iron Age II occupation levels and a series of tombs whose dates range from the Late Bronze Age through to the Roman period.[109] The excavator used Philistine pottery to date several tombs in Area C on the southwest slope of the tell to Iron Age I, one being the so-called *Philistine* tomb (Tomb C1). This rock-cut tomb sheds some light on burial customs of the 12th century BCE. With its five burial *loculi*, it bears some similarities to the Iron Age I *Philistine* tombs from Far'ah.[110] The site's distance from any main centres perhaps resulted in less integration with the broader region during the Iron Age, as is demonstrated by the continued use of Late Bronze Age rock-cut tombs into the Early Iron Age; such tombs are notably absent in the Early Iron Age southern highlands.[111]

Material: This site yielded a series of figurines with long hair and with their hands on top of their heads; these figurines were originally attached to vessels.[112] The figurines are comparable to ones from Mycenaean IIIC cemeteries at Perati, Ialysos, Rhodes, and other Aegean sites.[113] They are also comparable to the depictions of female mourners with their hands above their heads on Mycenaean larnakes.[114] The discovery of Aegean-inspired *mourning vases* at 'Eitun (although unprovenanced) provides evidence of an Aegean influence on

[106] Concerns regarding the stratigraphy in which the hoard was excavated prevented the incorporation of additional material in this study.
[107] Tadmor and Misch-Brandl 1980.
[108] MacKenzie 1912–1913, p. 63, pls. 26–27.
[109] Edelstein *et al.* 1971.
[110] Laemmel 2003, pp. 49–51.
[111] Fantalkin 2008, p. 29.
[112] Dothan, T. 1982, pp. 237–249.
[113] Dothan, T. 1982, p. 244; Iakovidis 1966; Kurtz and Boardman 1971.
[114] Cavanagh and Mee 1995, pp. 46–51, 60–61, figs. 1–10; Iakovidis 1966, pp. 46–49; Vermeule 1965.

Philistine burial customs; however, Ben-Shlomo and Press consider the figures on these vases to be of a different style to other Philistine figurines, which suggests that the vases might not date to the Iron Age I.[115] Tomb C1 yielded Iron Age I Philistine kraters, bowls, and jugs, including examples decorated with fish, birds, and antithetic spiral motifs;[116] an omega-shaped buckle of Aegean form;[117] stone beads; and conical seals — one with a spiral motif similar to seals found in Cyprus.[118]

Jewellery: The assemblage of jewellery recovered from Tomb C1 displays both local and foreign characteristics. Amongst the collection were distinctive geometrically-incised copper alloy bangles (nos. 212, 227, and 228) comparable to 13th to 10th century BCE examples from central Europe. These bangles were a prime factor in the excavator's tentative identification of the deceased as *Sea Peoples*.[119] The bangles were associated with an Early Iron Age Near Eastern-style decorated toggle pin (no. 223) of a type popular in northern Cisjordan at Taiyiba and Nasbeh,[120] and in Transjordan at the Baq'ah Valley, Sahab, and Sa'idiyeh.

3.2.4 Far'ah

Location: Far'ah is located in the northern Negev, on the southwestern edge of the coastal plain. It lies 25 kilometres southeast of Gaza. The ancient site and extensive cemeteries sit on a hill within the Beer Sheba basin, an area of fertile alluvial soil with water supplied by the Wadi Guzzeh. The site was situated advantageously along two major axes of communication: a coastal route connecting Egypt to Syria, and an overland route via Beer Sheva linking the Mediterranean to Transjordan.

Context: Interpretations of the early 20th century excavations at Far'ah[121] suggest to some scholars that the archaeological data points to an Egyptian garrison at the site,[122] while more recently, the Egyptian-style material at the site has been viewed as the result of Canaanite elite emulation of Egyptian material.[123] According to Laemmel, the cemeteries that date to the Late Bronze Age–Early Iron Age include Cemeteries 100, 500, 600, 800, and 900.[124] A number of scholars specifically date the majority of burials in Cemetery 200 to the Iron Age IIA.[125] Many burials are affiliated with Philistine elements, in particular

[115] Ben-Shlomo and Press 2009, p. 48.
[116] Edelstein and Aurant 1991, pp. 26–28; Dothan, M. and T. Dothan 1992, p. 201.
[117] Cf. Qasile: Mazar 1985a, p. 6; Megiddo: Loud 1948, pl. 177:12.
[118] Refer to Edelstein and Aurant 1991, p. 30.
[119] Edelstein and Aurant 1991, p. 29, fig. 7.
[120] Cf. examples from Khirbet Nisya: Livingstone 2002, p. 23, fig. 7:1–8.
[121] Petrie 1930; 1932.
[122] Dothan, M. 1957; Wright 1959; 1966, p. 74.
[123] Braunstein 1998; 2011.
[124] Laemmel 2003.
[125] McClellan 1975, p. 177; 1979; Israeli 1993. As Cemetery 200 dates from the later Early Iron Age, these tombs were only briefly reviewed by Laemmel (2003, pp. 47–48).

the rock-cut tombs within Cemetery 500 (Tombs 532, 542, 544, 552, and 562).[126] Some burials within Cemetery 900 contain bench tombs also attributed to foreign settlers (for example, Tombs 902, 905, and 914),[127] a type paralleled in Late Bronze Age Cyprus.[128]

Material: These cemeteries contained a varied assortment of Canaanite, Cypriote, and Philistine ceramics, such as Levantine pomegranate vessels,[129] Cypriote white painted juglets,[130] and Philistine deep bowls.[131] Tombs 935, 552 and 562 contained anthropoid coffins comparable to examples from Balah,[132] Beth Shean,[133] Lachish,[134] Amman,[135] Pella,[136] and Sahab;[137] this form of burial is typically associated with Egyptian presence in the southern Levant, but it was possibly related to the arrival of Aegean mercenaries in the 13th century BCE.[138] Tombs 542 and 562 are also distinctive for containing some of the earliest instances of carburised steel.[139] A comparison of burial customs at Far'ah, such as shaft graves, pit graves, jar burials, chamber tombs, and bench tombs, reveals no distinct cultural subgroups in mortuary practice, but funerary assemblages do express several aspects of status through the presence of prestige goods, particularly those goods of Egyptian style. The inclusion of Egyptian funerary material in the burial program at Far'ah, as demonstrated by the high quantities of Egyptian-style pottery, stone vessels, scarabs, amulets, and lotus seed pendants invested with non-Egyptian symbolic meanings — long after the departure of Egypt from Canaan — is thought to reflect 'true but limited assimilation.'[140] Although most of this assemblage indicates continuity with the Late Bronze Age,[141] one of the most significant changes in tombs of the Early Iron Age is a marked increase in metals, and the first appearance of iron for weapons, tools, and ornaments.[142]

Jewellery: The site yielded a vast array of metal jewellery. One of the most interesting features hinting at a new Early Iron Age identity in the region is the presence of numerous tassel pendant earrings at the site (nos. 238a, 256, 257, 259, 325, 345, 357, 358, 470, 503, 563, 675, 712).[143]

[126] Laemmel 2003, pp. 49–51.
[127] Killebrew 2005, p. 110.
[128] E.g., Tomb 119 at Palaeopaphos-*Eliomylia*: Karageorghis 1990, pp. 77–78. For additional examples, refer to Laemmel 2003, p. 70.
[129] Laemmel 2003, p. 209. Cf., e.g., Mazar 1980, pp. 116–117.
[130] Laemmel 2003, p. 212. Cf., e.g., Tufnell 1940, pl. 51:282; 1958, pl. 79:823–826; Petrie 1933, pl. 39:89A.
[131] Laemmel 2003, p. 125. Cf., e.g., Mazar, A. 1985a, figs. 11:13, 13:1–3; Dothan, M. and Porath 1993 figs. 19:11, 26:10–11, and 26:13–17, pl. 40:15 and 40:19; and Dothan, T. 1998, pl. 7:2.
[132] Dothan, T. 1972; 1973; 1979.
[133] Oren 1973, pp. 105–139.
[134] Tufnell 1958b, pp. 131–132, 248–249.
[135] Yassine 1975.
[136] Yassine 1975, p. 62.
[137] Albright 1932b.
[138] Refer to Verduci 2013.
[139] Stech-Wheeler *et al.* 1981, p. 258; Sherratt 2000. Carburisation is the process of heating iron in direct contact with charcoal. Carbon is absorbed into the iron converting the areas in which they combine into steel: refer to Scott 1991, p. 138.
[140] Braunstein 2011, p. 16.
[141] Laemmel 2013, p. 173.
[142] Laemmel 2013, p. 178.
[143] On the link between tassels and identity, refer to Section 6.2.1.

Also found at Far'ah was a copper alloy spectacle spiral (no. 600). This form is plentiful during the Late Bronze Age in central Europe, Mycenaean Greece, and Anatolia. Parallels can also be drawn between spectacle spirals and tassel earrings east of the Jordan River, at Madaba (no 1191), Tawilan (no. 1474), and Wadi Fidan.[144] Early examples of iron jewellery include several iron bangles from Tomb 542.[145] In addition, violin-bow fibulae of Aegean form are reported to have come from the site.[146] Metal beads at Far'ah are most often of gold, although silver and electrum beads are also popular, whereas beads in copper alloy are rare.

3.2.5 MEGIDDO

Location: Megiddo is 30 kilometres southwest of the coastal city of Haifa. It is located at the head of an ancient pass through the Carmel Ridge connecting the Jezreel Valley and the coastal plain. To the north is a fertile flood plain characterised by springs and streams. Megiddo's strategic position offered its inhabitants opportunities for trade and local exchange.

Context: Archaeological exploration began at Megiddo in the early 20th century,[147] with continued explorations exposing Areas AA, BB, CC, and DD.[148] Recent excavations have also discovered Early Iron Age strata in Levels F, H, K, L, and M.[149] Stratigraphic problems continue with the material excavated in the earlier part of the 20th century at Megiddo, and strata and some tombs once dated to the Early Iron Age have been redated to the Late Bronze Age or Late Bronze Age–Early Iron Age transition.[150] The excavators assigned Stratum VIIA to the Late Bronze Age–Iron Age I transition, Stratum VIB to Iron Age, Stratum VIA to Iron Age I–IIA, and Stratum VB–IVA to Iron Age IIA.[151] Initial excavations exposed Stratum VIIA in all four areas, with a Late Bronze Age palace, city gates, and glacis revealed in Area AA.[152] Early in Iron Age II, extensive construction followed a period of violent destruction in the area of the palace in Stratum VIIA, which according to Albright was 'the result of the northward expansion of the Philistines.'[153] Ussishkin corroborates this assessment, and suggests that the *Sea Peoples* did indeed destroy Stratum VIIA.[154] Of the many tombs excavated during the earliest phase of excavations, only Tombs 37, 39, 62, 71, 221, 1768, and 1778 were assigned to Stratum VI by the excavators *and* contained metal jewellery.[155]

[144] Levy *et al.* 2005, p. 467.
[145] Petrie 1930, p. 8.
[146] Bouzek 1985, figs. 2 and 102.
[147] Schumacher 1908. Cf. Finkelstein *et al.* 2006, pp. 66–80.
[148] Guy 1931; Fisher 1929; Lamon and Shipton 1939; Loud 1948.
[149] Finkelstein *et al.* 2006; Yadin 1970a; Finkelstein *et al.* 2000.
[150] Kenyon 1979, pp. 193–194.
[151] Finkelstein *et al.* 2000; Finkelstein *et al.* 2006, p. 17.
[152] Guy 1931; Fisher 1929; Lamon and Shipton 1939; Loud 1948; Yadin 1970a; Finkelstein *et al.* 2000.
[153] Harrison 2004, p. 12.
[154] Ussishkin 1995. See also the findings of the Oriental Institute, which considers the destruction level in Stratum VIA (corresponding to burnt Stratum X at Qasile) the result of an earthquake marking the transition to the Iron Age II: Kempinski 1989, p. 89; Mazar, A. 2007.
[155] Guy 1938. Tombs 37, 39, 62, 71, and 221 are also assigned to the Iron Age I by Bloch-Smith (1992) and Paice (2004), and Tombs 1768 and 1778 to the Iron Age I by Paice (2004).

Material: The material culture of 12th century BCE Megiddo, like Beth Shean, maintains Late Bronze Age characteristics into the Early Iron Age. Such continuity incorporates Egyptian, Canaanite, and Philistine features, and an evident decline in international trade. Objects with Aegean ancestry in Megiddo's Early Iron Age strata consist of an omega-shaped buckle;[156] the only Aegean-style weapon to be found in Cisjordan — a Naue II sword possibly of 11th century date;[157] double axes from Stratum VIB in Area AA,[158] and from Stratum VIA in Level H;[159] and a violin-bow fibula of Aegean form found in association with the latter object.[160] Double axes and violin fibulae occur together in other 11th century BCE contexts, such as Tomb 1029 at Achziv.[161] A large collection of spool-shaped loomweights found in Stratum VI,[162] despite closely resembling Philistine loomweights, are mainly perforated; however, one imperforated example links the collection to Aegean-type textile production practices seen at Ashdod and Ekron. A lion-head rhyta decorated in a Philistine-style net pattern is suggestive of an Aegean or perhaps Anatolian influence.[163] Aegean- and Cypriote-style ceramic wares include locally produced kraters, pyxides, and stirrup jars,[164] and an ivory handled iron knife is comparable to Cypriote types.[165] Funerary practices at Megiddo are comprised of cremation burials, jar burials, rock-cut tombs, pit graves, shaft tombs, and bench tombs.[166]

Jewellery: A large quantity of Early Iron Age jewellery from Stratum VII and Stratum VIA hoards (Hoards 1, 2 and 3) is comprised of gold, silver, copper alloy, and the occasional iron object.[167] A fourth hoard (Hoard 4) was found in a clay bowl within a cult corner of Room 2081 in Area AA Stratum VA, along with approximately 100 astragali and a violin-bow fibula.[168] In addition, an unpublished Early Iron Age silver and gold hoard discovered in 2010 contains a unique gold earring decorated with moulded ibexes (or wild goats) that has no known parallels.[169] Metal beads are present only in high-status burials and within the Phase VIIA Palace — all 64 are in gold. Canaanite jewellery forms dated to the Late Bronze Age, such as crescent pendants (nos. 770 and 771), continue into the Iron Age I (for example, no. 776). Amongst the infant burials in Tomb 37 was an Iron Age I jar burial (37C) containing an infant adorned in bangles and beads.[170]

[156] Mazar 1985a, p. 6.
[157] Bouzek 1985, p. 185; Mazar 1985a, p. 6.
[158] Loud 1948, pl. 183.
[159] Negbi 1991, p. 226.
[160] Bouzek 1985, figs. 2 and 102.
[161] Yasur-Landau 2013.
[162] Refer Yasur-Landau 2011a, fig. 5.
[163] Dothan, T. 1982, p. 229; Meiberg 2012.
[164] Loud 1948, pp. 156–158; Amiran 1970, pl. 57:12–13; Yasur-Landau 2010, pp. 203–204.
[165] Dothan, T. 1992, pp. 14–23.
[166] For an overview of all these types, refer to Bloch-Smith 1992.
[167] Loud 1948, pls. 228:6 and 229:7–9.
[168] Loud 1948, pp. 45–46; Bouzek 1985, figs. 2 and 102.
[169] Arriza 2012.
[170] Guy 1938, pp. 77, 79.

3.2.6 Nasbeh

Location: The eight-acre site of Nasbeh is located in the eastern hill country, 12 kilometres northwest of Jerusalem.[171] It is situated on a low plateau surrounded by ravines near the ancient route between Jerusalem and the hill country to the north, securing its position as a defensible Judean stronghold.

Context: Excavations at Nasbeh in the early 20th century revealed a sequence of occupation extending from the Early Bronze (EB) through to the Hellenistic–Roman periods.[172] A re-analysis of the stratigraphic evidence by Zorn in 1993 provided the architectural phasing for the site.[173] The results of archaeological explorations at Nasbeh and the subsequent reinterpretation of those results confirm the significance of Nasbeh's Iron Age IIA–IIC levels, associated with Stratum III.[174] Additional Iron Age material was discovered in nearby extramural rock-cut bench tombs; those with the least stratigraphical mixing and that correspond to the Early Iron Age are Tomb 32 in the West Cemetery and Tomb 54 in the Northeast Necropolis. Wright dated Tomb 54 to the 10th century BCE, while Tomb 32 contained material belonging to the 12th to eighth centuries, particularly the 10th and perhaps ninth centuries.[175]

Material: Nasbeh was an important frontier city with a massive fortification wall and an imposing gateway. Iron Age IIA–IIC material recovered from occupational strata include three and four-room structures; multiple burials; Philistine, Cypriote, and Cypro-Phoenician pottery; Canaanite lamps, pitchers, bowls, and jars; Judean pillar figurines; cosmetic items; and large quantities of metal artefacts.[176] Recent assessment of Nasbeh's Iron Age II pottery has also identified interregional contact through the presence of imported Ammonite wares from Transjordan (painted wares and black wares)[177] as well as Ashdod chemical fingerprints in Philistine bichrome ware.[178]

Jewellery: Nasbeh yielded some 2681 beads and 16 pendants during the course of excavations, including common Canaanite types such as eye, melon, and lotus-seed beads, and axe and club-shaped bone pendants.[179] More than half of these beads and pendants were within Tomb 32, although none are made of metal. Of the metal jewellery, a large concentration of toggle pins, bangles, rings, and earrings was uncovered in Tombs 32 and 54; these are predominantly made of copper alloy, but occasionally of gold or iron.[180] The assemblage of Early Iron Age bangles appears to conform to standard weights, with Aaron Brody and

[171] Although unverified, Nasbeh may be the biblical town of Mizpah in Iron Age Judah: Zorn 1993, pp. 34–69.
[172] McCown 1947.
[173] Zorn 1993.
[174] McCown 1947; Wright 1948; Zorn 1993.
[175] Refer to Wright 1948, p. 472; Brody (pers. comm.).
[176] McCown 1947; Brody 2014b.
[177] Brody 2014a, pp. 60–61.
[178] Gunneweg *et al.* 1994.
[179] Harrison 1947, p. 265.
[180] Harrison 1947.

Elizabeth Friedman suggesting they possibly acted as a medium of exchange, holding a monetary value.[181] Similar observations have been made for Sa'idiyeh.[182] Metallurgical analysis has identified some of these bangles as made of leaded tin-bronze (nos. 874, 960, and 966).[183] Also amongst the finds were several geometrically incised Canaanite toggle pins (nos. 911, 925, 953, 958–959, 961–963 and 975–977) similar to types found at 'Eitun, Taiyiba, Baq'ah Valley, Sahab, and Sa'idiyeh.

3.2.7 Taiyiba

Location: The *ca.* nine-acre modern town of Taiyiba is situated on the western bank of the Wadi Nahal Issakhar in the Galilee, close to the Samaria Hills and approximately seven kilometres northeast of Beitin.[184] The village is located at the intersection of two roads, one leading northwest from Jericho and the other northeast from Jerusalem.

Context: The ancient site was first surveyed in 1977, with surface finds indicating that the site was reoccupied between the Iron Age I and IIA following a gap in occupation after the Early Bronze Ib.[185] Tombs were discovered in 1994 during excavations for a building foundation.[186] Tomb 6, a damaged burial cave, is located on the western slope of the Samaria Hills near the village. The excavators date the main period of the tomb's use to the second half of the 11th or the beginning of the 10th century BCE; it is therefore one of the oldest tombs found so far in Samaria.[187]

Material: Surface sherds are represented by a large quantity of Iron Age I cooking pots with erect or slanted rims, and collared-rim and hole-mouth storejars.[188] Apart from the hundreds of human bones found within Tomb 6, a large pottery assemblage contained many complete or nearly complete burial containers. Ceramic parallels for the wares found at Taiyiba occur in Strata V–VI at Megiddo, Strata 8–9 at Keisan, Strata VII–VIII at Qiri,[189] and nearby Tsur Natan in Iron Age IIA levels.[190] In addition to the locally produced wares is Cypro-Phoenician black-on-red ware, which appears at other Levantine sites at the end of the Iron Age I period.[191]

Jewellery: The majority of the jewellery recovered from Taiyiba dates to the Early Iron Age period. The metal objects from Tomb 6 include an assortment of copper alloy bangles,

[181] Brody and Friedman 2007, pp. 103–104.
[182] Green 2007, pp. 295–296. Bronze bangles are argued to conform to standard weights in Africa, Europe, Latin America, and the Near East: Bisson 2000, p. 114; Fisher 1984; Herbert 1984; Hosler *et al.* 1990; Lassen 2000, pp. 241–243; Pare 2000, p. 28; Ruiz-Gálvez 2000, pp. 270–271.
[183] Brody and Friedman 2007, p. 107.
[184] On the identification of Taiyiba with biblical Ophrah, see Rainey 2006, p. 272.
[185] Finkelstein *et al.* 1997, pp. 368–369.
[186] Abu Zidan 2011; Teppe 2012.
[187] Yannai 2002. Cf. Chronology in Albright and Gjerstadt 1953, p. 22.
[188] Albright and Gjerstadt 1953.
[189] Yannai 2002, p. 255.
[190] Alon *et al.* 2013.
[191] Yannai 1995, p. 279.

rings, and toggle pins. Comparisons can be drawn with the metal jewellery of ʻEitun, Nasbeh, Baqʻah Valley, Sahab, and Saʻidiyeh.[192] This is particularly the case with geometrically incised toggle pins (nos. 768–769) and penannular bangles decorated *en pointillé* with wavy lines of dots (nos. 747–748). A closed bangle with a broad flat section (no. 752) is an extremely rare type, while a damaged stirrup ring (no. 760) has incised symbols that resemble cuneiform but do not correspond to any known cuneiform signs or numerals.[193]

3.3 REGIONAL SITE SURVEY: TRANSJORDAN

Six sites from the area east of the Jordan River are summarised below in alphabetical order: Baqʻah Valley, Deir ʻAin ʻAbata, Madaba, Sahab, Sa'idiyeh, and Tawilan.

3.3.1 BAQʻAH VALLEY

Location: A number of settlement sites and burial caves were discovered within the Umm ad-Dananir region of the fertile Baqʻah Valley, approximately 20 kilometres northwest of Amman. Several of these burial caves are located on the lower slopes of Jebel al-Hawāyah.

Context: Surveys in the Baqʻah Valley revealed several settlement sites and numerous burial caves (many already looted), reflecting the shift to smaller and more numerous settlements at the end of the Late Bronze Age across the Transjordanian plateau.[194] These archaeological surveys were aided by the use of geophysical prospecting instruments, such as cesium magnetometres and electrical resistometres. The archaeological results suggest a peaceful transition in the region from the Late Bronze Age through to Iron Age periods, with no evidence of intrusive populations.[195] A multiple burial (Cave A4), dated by the excavators to the Iron Age I, was discovered during the 1980 season on the Jebel al-Hawāyah.[196]

Material: Cave A4 contained the skeletal remains of over 225 individuals and held a wide assortment of artefacts dated to Iron Age I. The burial is a rare instance of gender segregation in death, with men placed in the north of the cave and women and children placed to the south.[197] Twelve human crania arranged on a shelf in the tomb's northwest corner also demonstrate unusual burial practices. An assemblage of 70 whole vessels accompanied the individuals buried in Cave A4; amongst these was a locally produced beer jug of Philistine-style. Although most of the pottery was of inferior quality, the tomb's significance was apparent due to the abundance of iron artefacts found within it.[198]

[192] Jewellery from Khirbat Nisya also bears similarities: Livingstone 2002.
[193] Brent Davis (pers. comm.).
[194] McGovern 1980b; 1986.
[195] McGovern 1986.
[196] McGovern 1980b.
[197] McGovern 1980b, pp. 249–267.
[198] McGovern 1986.

Jewellery: Non-metallic jewellery finds demonstrate a preference for simple stone and shell beads. Long distance trade is indicated by the fact that 71 of these shells are of the Red Sea *Cypraea annulus* species.[199] Metallurgical analysis revealed that the majority of iron jewellery pieces are in fact carburised steel, one of the earliest instances of this alloy,[200] although it is not possible to determine if carburisation was an intentional process or the result of smelting techniques.[201] Despite extensive commingling of the skeletal remains, many rings, bracelets, and anklets were *in situ*. A large number of earrings and rings occurred in the southwest of the cave, presumably the area where the majority of women and children were located.[202] In addition to the many iron bangles and rings (whose appearance marks the transition to the Iron Age across the southern Levant), there were copper alloy lunate earrings with tassel attachments (nos. 988 and 1040), as well as coiled wire cones (nos. 1041–1042) that appear to be elements of tassel earrings that are similar to examples from Far'ah (nos. 357–358, 712), Tawilan (nos. 1459–1462) and Ashkelon.[203]

3.3.2 Deir 'Ain 'Abata

Location: Deir 'Ain 'Abata is located in a steep mountainous region about three kilometres southeast of the Dead Sea. Burials are situated along the ridges of gullies, blending in with the surrounding terrain. The area is north of the UNESCO world heritage monastic complex known as the Sanctuary of Agios Lot, near Ghor es-Safi.

Context: Surveys of Area J in the vicinity of Deir 'Ain 'Abata resulted in the discovery of many cairn tombs.[204] Illicit digging caused the destruction of many of these structures. The excavators assign a Middle Bronze Age II date to the tombs,[205] despite the presence of Iron Age carinated bowls and strainer jugs of the same fabric as other ceramics believed to be of Middle Bronze Age date;[206] however, these ceramics were compared to material from outside the region as they cannot be checked against any local stratigraphic sequence. In fact, the relationship between cultural material and tomb dates at the site is not readily apparent and much of the mixed jewellery assemblage in Tombs J.II, VII, VIII, XV, XVII, and XXX displays characteristics more typical of the Early Iron Age period. Although I exclude some of the objects from the dataset as they may belong to the Middle Bronze Age or even Persian periods,[207] I have assigned the remainder of the pieces from the six tombs to the Early Iron Age based on stylistic parallels.

[199] Reese 1986, p. 321.
[200] Compare the objects from Far'ah Tombs 542 and 562: Stech-Wheeler *et al.* 1981, p. 258; Sherratt 2000.
[201] For discussion of this technology, see McNutt 1990, pp. 148–151.
[202] McGovern 1986, p. 61.
[203] King and Stager 2001, ill. 155.
[204] Politis 2012.
[205] Collins *et al.* 2012, pp. 45–77.
[206] Collins 2012a, p. 63; Joyner 2012, p. 74.
[207] Tubb 2012, p. 102.

Material: The minimum number of individuals interred in Area J was estimated at 130.[208] Associated with these remains were a large number of poorly preserved vessels, such as cooking pots, carinated bowls, platter bowls, jugs, juglets, and hole-bottomed jars.[209] Additional material included lamps and a *duck-bill* axe of copper alloy.[210]

Jewellery: In total, 2603 shell, stone, vitreous, and metal beads were recovered from Deir ʻAin ʻAbata, although none of the metal beads have been included in the dataset as the (then) unpublished beads could not be located.[211] The assemblage of metal jewellery from Tombs J.II, VII, VIII, XV, XVII, and XXX are mainly made of copper alloy and iron, along with a rare hair spiral of lead (no. 1154). Certain objects, such as the iron finger rings (nos. 1124, 1127, 1160) and bangles (nos. 1128–1129, 1133), make their first appearance at the start of the Iron Age across the southern Levant. Other objects, particularly pieces such as the copper alloy tassel earrings (nos. 1142–1143), have numerous parallels at other Iron Age I sites, such as Farʻah, Nasbeh, Baqʻah Valley, Madaba, Sahab, and Wadi Fidan.[212]

3.3.3 Madaba

Location: The large low-lying tell and acropolis of Madaba is now represented by a *ca.* 16-hectare rise in the centre of the modern city, approximately 30 kilometres southwest of Amman. Madaba is located in the fertile Madaba Plain, north of Wadi Hasa on the Old King's Highway between Amman and Dhiban.

Context: Upon digging the foundations for a house to the east of the ancient tell in 1948, local workers discovered a natural cave, known as Tomb A, dated by the excavators to the Iron Age I.[213] A second Iron Age I–IIA multiple burial (Tomb B) discovered in 1967 on the south side of the tell contained no jewellery.[214] In subsequent decades, excavations focused first on the remains of the Classical period surrounding the tell, then on understanding Iron Age settlement activity in the broader Madaba Plains region.[215] The ancient site covers a lower mound (Field A) and an upper mound (Fields B and C). Results of these excavations, particularly in Field A, indicate that a substantial settlement was located at the site by the time of the Late Bronze Age–Early Iron Age transition, and that its inhabitants constructed Early Iron Age monumental buildings and a fortification wall suggestive of an important regional centre.[216]

[208] Gruspier 2012, p. 93.
[209] Collins 2012a.
[210] Collins 2012a, p. 66; Tubb 2012, p. 99.
[211] Collins 2012b, Table 2.
[212] All of these earrings are included in this dataset except for those from Wadi Fidan: Levy *et al.* 2005, p. 467.
[213] Harding and Isserlin 1953.
[214] Piccirillo 1975; Thompson 1986. Cf. dating by Dornemann (1983, pp. 34–35, 37).
[215] Harrison 2009. An extensive list of publications and preliminary reports is available on the University of Toronto website: http://www.utoronto.ca/tmap/index.html.
[216] Harrison 2009, p. 39.

Material: Finds recovered from Tomb A demonstrate continuity with Late Bronze Age traditions, with material similar to that found within cemeteries 500, 600, and 900 at Far'ah.[217] The contents mainly consist of locally produced bowls and lamps of poor quality. Some of these ceramics have parallels at nearby sites, including biconical jugs, which are unique to the region during the Late Bronze Age–Iron Age I.[218] The group of ceramics does not include any Cypriote or Philistine ware, but possibly includes a Mycenaean IIIB stirrup jar.[219]

Jewellery: Non-metallic items of jewellery, such as stone pendants, stone beads, and *Cypraea annulus* shell beads, were recovered from Tomb A along with a large quantity of metal pieces made of copper alloy and iron. Precious metal is represented amongst the finds by three silver lunate earrings (nos. 1179–1181). Objects in the tomb familiar from other Early Iron Age sites, such as Far'ah, include iron rings (nos. 1189–1190) and bangles (nos. 1196–1197), copper alloy toggle pins (nos. 1162–1167 and 1170–1175), tassel earrings (no. 1168), and a spectacle spiral pendant (no. 1191).

3.3.4 Sahab

Location: The village of Sahab is located 12 kilometres southwest of Amman along the road to Azraq. Some of the Iron Age settlement remains as a low tell near the centre of the modern town, but the true extent of the site is unknown. Several Early Iron Age burial caves lie within the town and on a hillside to the west. Sahab is one of the last major settlements on the route to Saudi Arabia and was probably one of the largest sites on the border of the eastern desert in the Iron Age.

Context: Judging by observations of surface remains, the site included a fortified acropolis with a walled city in Area E.[220] Limited excavations have identified Early Iron Age domestic architecture in Areas A, B, D, E, E/W, H, and G, and evidence of Early Iron Age construction over a destroyed Late Bronze Age settlement.[221] Upon learning that antiquities had been located near the village of Sahab in the early 20th century, archaeologists recovered material from a rock-cut burial cave (Tomb A) situated to the west of the tell on a hillside separated from the tell by a shallow valley.[222] Although this tomb was dated to the Iron Age IIB–C, there were few sherds within it and its dating remains undetermined.[223] This discovery was followed by the excavation of the Iron Age IIB Tomb B on the northwestern side of the tell.[224] Additional tombs include a large rock-cut bench tomb (Tomb C) in the centre of the modern town.[225] Although the earliest remains in Tomb C date from the

[217] Harding and Isserlin 1953, pp. 27, 36.
[218] Harding 1953, fig. 14:60–61; Herr *et al.* 2000, fig. 4.30:16 and 4.30:18–19; Franken 1969, fig. 52:5. See also Winnett and Reed 1964; Dornemann 1983, p. 45, fn. 3.
[219] Dornemann 1983, p. 32, pl. 4:165; Harrison 2009, p. 38.
[220] Ibrahim 1972, p. 24.
[221] Ibrahim 1974; 1975.
[222] Albright 1932b.
[223] Ibrahim 1972, p. 24.
[224] Harding 1948.
[225] Dajani 1970.

14th century BCE, the majority of finds were dated to the Late Bronze Age–Iron Age I by the excavator.[226] In 1972, excavations were renewed in Area C on the western slope of the tell when caves were discovered following construction of a foundation for a modern house.[227] Amongst these caves was another large cave tomb (Tomb 1); this stratigraphically secure context was dated by the excavators to Iron Age I, corresponding to Sahab Phase I.

Material: Tomb A contained an anthropoid coffin resembling those discovered at Beth Shean and Far'ah,[228] along with double pithos burials similar to those found at Sa'idiyeh. These double pithos burials are possibly a foreign burial custom introduced during the Iron Age I,[229] variously argued to be of Aegean *Sea Peoples*,[230] Hittite,[231] or Egyptian origin.[232] The mortuary practices in Tomb A appear to be more similar to those of Late Bronze II or Late Bronze Age–Iron Age I than those of Iron Age IIB–C; however, the limited records mean that any stratigraphic reconstruction is impossible, so this tomb's artefacts have been excluded from the dataset. The contents of Tomb C consist of imported and imitation Mycenaean wares, such as stirrup vases, pyxides, and flasks, comparable to wares from Megiddo and Sa'idiyeh.[233] Tomb 1 included eight burial jars, some containing evidence of cremation,[234] and collared rim pithoi that have stamped seal impressions on their rims that are perhaps of North Syrian origin, [235] similar to pithoi from 'Umayri in the Madaba Plains region.[236] Amongst the remains in Tomb 1 were also two wooden coffin burials, one identified as a warrior based on the accompanying dagger, bronze bracelet, and iron anklet. Egyptian influence is evident in associated scarabs and a bead-like seal.[237] All of the excavator's registration numbers for jewellery that are prefixed by 'SA' come from Tomb C; according to Ibrahim,[238] the remainder are presumed to be from Area C Tomb 1.

Jewellery: The large jewellery assemblage found in Tomb C and Area C Tomb 1 is mainly comprised of copper alloy bangles and toggle pins. These objects are comparable to others discovered in the Levant, such as those from Nasbeh, Taiyiba, Baq'ah Valley, Madaba, and Sa'idiyeh. The small quantity of gold and iron artefacts from Tomb 1 (nos. 1200–1201, 1209–1210, 1213, 1222–1223) indicates that the interred individuals possessed an elevated status. The iron objects that date to 1250–1150 BCE are some of the earliest to be found in the southern Levant.[239] Also in Tomb 1 were tassel earrings (nos. 1198–1199 and 1218–1219) and a geometrically incised toggle pin (no. 1217).

[226] Dajani 1970.
[227] Ibrahim 1972, p. 31.
[228] Bloch-Smith 1992, p. 162. This tomb was originally dated to the ninth century: Albright 1932b.
[229] Wolffe 2005.
[230] Tubb 1990, pp. 29, 33; 1995.
[231] Gilmour 2002; Gonen 1992, p. 30; Holladay 2001; Negbi 1991; 1998.
[232] Wengrow 1996, pp. 318–319.
[233] Dajani 1970, p. 31.
[234] This interpretation awaits further study: Ibrahim 1972, p. 32.
[235] Ibrahim 1987, p. 78.
[236] Refer to Herr 2012, p. 217.
[237] Ibrahim 1987, p. 77.
[238] Ibrahim 1972, pp. 31–34.
[239] Harding and Isserlin 1953, p. 32, pls. 4:160–161 and 5:228–229.

3.3.5 Sa'idiyeh

Location: Sa'idiyeh is located on the south bank of Wadi Kufrinjeh, approximately halfway between the Dead Sea and the Sea of Galilee, and just under two kilometres from an important ford on the River Jordan. The site held a strategically important position in a fertile area at the intersection of trade routes through the Jordan Valley. Sa'idiyeh is comprised of a prominent upper tell of *ca.* two hectares (Sa'idiyeh esh-Sherqi) and a less pronounced lower tell (Sa'idiyeh el-Gharbi).

Context: Following the identification of Iron Age sherds,[240] archaeologists revealed the remnants of a well-planned city on the upper tell.[241] Stratum XII dated to Iron Age I (or perhaps IIA),[242] represents a destruction horizon overlaying the 'Residency' in Area AA and the 'Western Palace' in Area EE; these structures reflect Egyptian-style architectural traits.[243] A water system also assigned to Stratum XII in Area GG has parallels in Greece at Mycenae and Tiryns.[244] Stratum XIII is tentatively dated to the second quarter of the 12th century, and Strata XV–XIV to the late 13th to early 12th centuries.[245] Other Iron Age levels include Strata VIII–XI, provisionally dated to the 10th–ninth centuries. On the lower tell, a Late Bronze Age–Early Iron Age cemetery was discovered, whose graves produced evidence of long-distance trade and cultural links.[246] The cemetery contained 365 burials, with more than 70 yielding metal jewellery dated to the Late Bronze Age IIB–Iron Age I period, according to Pritchard and Green.[247] Tomb 101, originally dated to the Late Bronze Age by Pritchard, is also included in the dataset, as it was dated to the Iron Age I by Jack Green in his reanalysis of site phases at Sa'idiyeh.[248] According to Green, Period 1/site phase 1 in the cemetery covers the Late Bronze Age IIB–Iron Age IA (late 13th–12th centuries), and Period 2 covers the Iron Age IB–IIA (late 12th–10th/ninth centuries).[249]

Material: Tombs types at Sa'idiyeh include pit burials, cist burials, jar burials, and double pithos burials. Tubb interpreted the double pithos burials in Period 1 tombs (for example, Tombs 209 and 292) as evidence for a *Sea Peoples* population at the site,[250] specifically Aegean mercenaries in Egyptian service.[251] Several of the earliest Early Iron Age tombs excavated by Pritchard exhibit a range of prestige items;[252] for example, the quality of the personal items found with the female remains in Tomb 101 indicate her special status. In addition to the usual array of pottery, Tomb 101 yielded cosmetic aides; bronze objects,

[240] Glueck 1951, p. 292.
[241] Tubb 1988a; 1988b.
[242] Refer to Green 2006, pp. 417–418.
[243] Tubb and Dorrell 1993, fig. 10.
[244] Tubb 1990b, p. 102; 1995, p. 144, fn. 4; 1998, pp. 105–106.
[245] Tubb *et al.* 1996, fig. 20.
[246] Ibrahim *et al.* 1976, pp. 41–66; Smick 1973.
[247] Pritchard 1980; Green 2006. Tombs 107, 117, 119, and 240, which fall within Pritchard's earliest date range — that is, the Late Bronze II — are excluded from this study.
[248] Green 2006, p. 52. *Contra* Pritchard 1980, p. 9.
[249] Green 2006, p. 52.
[250] Tubb 1990, p. 33.
[251] Tubb 1995.
[252] Green 2010, p. 766.

including a Cypriote-style bronze tripod, considered a specialised prestige object that appears in the 13th–12th centuries in Cyprus and elsewhere along the Levantine coast;[253] and 573 beads of ivory, gold, and carnelian.[254] The tombs also contained imported or imitation Aegean and Cypriote pottery, Philistine wares, and ivory and stone vessels.[255] A decline in cemetery use between Periods 1 and 2 during the 12th century, coinciding with the disappearance of foreign imports and a move to cist rather than pit burials, may correspond with Egyptian withdrawal from the region.[256]

Jewellery: Although stone, shell, and vitreous beads come from most burials, metal objects (particularly in Period 1 burials) are few. Precious metal items of jewellery are made of gold, electrum, and silver — the richest assemblages being in Tombs 101 and 331. Items of interest include a bi-metallic ring composed of two outer bronze rings and one inner iron ring (nos. 1418–1419) and geometrically incised toggle pins (nos. 1330 and 1373) similar to those found at ʻEitun, Nasbeh, Taiyiba, and Sahab. The wearing of anklet pairs by infants, children, and adult females at Saʻidiyeh, where these objects were *in situ* (for example, nos. 1336 and 1420), is considered evidence of gendered difference in adornment practices.[257] Burials containing anklet pairs include those at Lachish,[258] Pella,[259] Wadi Fidan,[260] and on Cyprus at Enkomi.[261]

3.3.6 Tawilan

Geography: The village of Tawilan is located near Petra in southern Jordan, in the hills just north of ʻAin Musa and east of the village of El-Ji. The ancient site is located on a flat terrace at the western base of Jebel Heidan in an intensely cultivated area irrigated by the ʻAin Musa.[262]

Excavation: Surveys in the early 20th century followed the identification of exposed Iron Age sherds over the site.[263] Initial excavations recognised Tawilan as an important Edomite site.[264] Further excavations in Areas I, II, and III revealed that Tawilan was an agricultural community,[265] only developing into an Edomite sedentary occupation during the eighth century BCE. Nowhere are there any defensive fortifications, although a new road leading from

[253] Catling 1964, pp. 192–203.
[254] Pritchard 1964, p. 9.
[255] Green 2006, p. 49.
[256] Green 2006, p. 55.
[257] Green 2007.
[258] Tufnell 1953, p. 389.
[259] Bourke and Hendrix 2001, fig. 4; Bourke (pers. comm.).
[260] Levy 1999, fig. 7.
[261] Gjerstad *et al.* 1934, p. 551.
[262] Bennett and Bienkowski 1995; Macalister 1912b, p. 15.
[263] Initially the site was thought to be biblical Bozrah, but this identification was later amended in favour of biblical Teman: Glueck 1934, p. 14. Cf. Glueck 1935; 1940. Roland de Vaux (1969) suggested that Teman was in fact synonymous with Edom.
[264] Bennett 1984; Bennett and Bienkowski 1995.
[265] Bennett 1984, p. 2.

Tawilan to El-Ji perhaps cuts through some kind of casemate wall.[266] Chronological development at the site during the Iron Age is divided into Phase I (10th–ninth centuries BCE), Phase II (eighth century), and Phase III (eighth–seventh centuries).[267] A jewellery hoard was found within a fragile copper alloy vessel in Area II near Phase II burial pit XXV.[268] Originally, Maxwell-Hyslop assigned the hoard to a date in the sixth to fifth centuries BCE,[269] but the objects in the hoard appear to pre-date other finds from the site. Based on comparison to other jewellery parallels (in particular the tassel earrings of Far'ah), scholars now interpret the hoard as belonging to the 10th–ninth centuries[270] — potentially constituting evidence of a previous settlement at the site between the Iron Age I–IIA.[271]

Material: Phase II was the major architectural phase at Tawilan, and it was from this level that most material was recovered, including seals, figurines, arrowheads, knives, blades, and bone spatulae.[272] Collared rim pithoi also appear at Tawilan, and are variously dated to the Iron Age [273] or specifically Iron Age IIB.[274] Phase I material at the site was limited to clay pits in Areas I and II, which may have served as a source of clay for local potters, while Iron Age IIA occupation at the site is suggested by the appearance of early Edomite pottery in Area III.[275]

Jewellery: Within the fragile copper alloy vessel mentioned above was one of the largest collections of gold jewellery ever found in Transjordan, along with a large collection of carnelian beads and organic fibres that are perhaps the remains of the beads' stringing thread.[276] Although some of the gold pieces are slightly crushed (perhaps post-depositionally), many of the items appear to be almost unworn.[277] Amongst these pieces are familiar jewellery types, such as a spectacle spiral pendant (no. 1474) and four tassel earrings (nos. 1459–1462).

3.4 REGIONAL SITE SURVEY: THE AEGEAN

Six sites from the Aegean are summarised below in alphabetical order: Kerameikos, Knossos North Cemetery, Lefkandi, Marmáriane, Perati, and Sellopoulo.

3.4.1 KERAMEIKOS

Location: Kerameikos, named for the potter's quarter with which the city came to be associated, lies within Attica, the region surrounding modern-day Athens. The site is situated to

[266] Bennett and Bienkowski 1995, p. 51.
[267] Bennett 1984, p. 4.
[268] Bennett 1984, p. 13; Maxwell-Hyslop 1984; Ogden 1995.
[269] Maxwell-Hyslop 1984, p. 23.
[270] Ogden 1995, p. 75.
[271] This dating would correspond to Phase I: Bennett 1984, p. 14.
[272] Bienkowski 1995.
[273] Herr 2001, p. 248.
[274] Bienkowski 1992, p. 167.
[275] Bennett 1984.
[276] Maxwell-Hyslop 1984.
[277] Ogden 1995, p. 69.

the northwest of the Acropolis and was originally located on the banks of the Eridanos River. The Sacred Way — the road to Eleusis — would intersect this important cemetery site in later periods.

Context: Some of the earliest excavations at Kerameikos were conducted in the late 19th to early 20th century.[278] Large areas of the site remain unexplored, as they lie beneath the modern city. The list of tombs from Kerameikos is extensive, with burials dating from Late Helladic IIIC through the Roman Empire;[279] those that the excavators date to the Submycenaean and Early Protogeometric periods (corresponding to the Iron Age I–IIA in the southern Levant) *and* that contain metal jewellery are listed below. An early tomb seriation based on Müller-Karpe's assessment of metal objects[280] was updated by Krause in 1975 to include burial types, stratigraphy, and style;[281] Krause's Phase IIa–b corresponds to the Submycenaean period and Phase III corresponds to the Early Protogeometric. Penelope Mountjoy attempted to lower the start of the Protogeometric to 1050 BCE, thereby suggesting some tombs at Kerameikos previously dated to the Submycenaean should be assigned a Late Helladic IIIC date; however, this chronology has not been employed here, as the end date of the Late Helladic IIIC remains a matter of debate.[282] Tombs in the Pompeion Cemetery (the area north of the Eridanos) mainly date to the Submycenaean/Phase II period; these tomb numbers are preceded by the prefix Subminoan. Early Protogeometric/Phase III tombs are mainly found in the Precinct XX Cemetery, and are preceded by the prefix PG. Occasionally Precinct XX tombs exhibit Submycenaean traits, such as PG 22 and 24, and are therefore considered transitional Submycenaean–Early Protogeometric.

Material: Kerameikos revealed a broad range of grave forms and grave offerings. Shaft graves and cist graves were equally common during the late Submycenaean period, whereas cist graves were the predominant form of burial in the early to mid-portion of the Submycenaean;[283] several cremation burials are also recorded for the Submycenaean period, although these occur with increasing frequency from the Submycenaean–Early Protogeometric transition.[284] Hägg argues that the evidence for cremation burial in this Early Iron Age period is possibly linked to the influence of Late Bronze Age central European funerary practices.[285] Pottery in Submycenaean graves is comparable to types found in the Late Helladic IIIC chamber tombs of Argos;[286] this might support the argument that the population at Kerameikos had perhaps arrived from the Argolid.[287] The varied assemblage of ceramics includes lekythoi, skyphoi, amphoriskoi, oinochoai, and pyxides; of these, the lekythos becomes increasingly popular in the Protogeometric period. Weapons make their first appearance since the Mycenaean

[278] Kraiker and Kübler 1939.
[279] E.g., Knigge *et al.* 1995, pp. 639–648; Kraiker and Kübler 1974, pp. 49, 89–97, 100–104, 185–186, 186–187; Kübler 1943, p. 33; and Schlörb-Vierneisel 1966, pp. 5–7.
[280] Müller-Karpe 1962.
[281] Krause 1975.
[282] For this stratigraphy and previous studies of the cemetery, refer to Mountjoy 1988. Cf. Dickinson 2006, pp. 14–23.
[283] Styrenius 1967, p. 49.
[284] Styrenius 1967, p. 72.
[285] Hägg 1987. On Urnfield practices, refer to Kimming 1964, p. 246.
[286] Kraiker and Kübler 1939, pp. 65, 75.
[287] Kraiker and Kübler 1939, pp. 162–163. *Contra* Desborough 1964, pp. 37, 40.

period in tombs of the Early Protogeometric, including a Naue II sword in PG 2 and an iron dagger with a bone handle in PG A.[288]

Jewellery: The burials at Kerameikos yielded a great quantity of metal jewellery. Wire spirals of European form that have their wire doubled over and then coiled (nos. 1482, 1586, 1607–1608, and 1594–1595) are particularly common in Submycenaean contexts.[289] The tombs are also plentiful in pins and fibulae of copper alloy or iron; apparently, these goods are not apportioned along gender-specific lines,[290] although more ornaments usually come from female graves than from male graves.[291] Submycenaean fibulae (for example, tombs SM 27, 39, 40, 42, 48, 70 and 108), pins (for example, tombs SM 27, 38–39, 53, and 108), and shield rings (nos. 1524, 1529, 1535, 1539, and 1574) recovered from Kerameikos are comparable to similar objects found at Lefkandi.[292] In particular, the large number of metal goods from SM 108 is comparable to the assortment of goods from Tomb 16 in the *Skoubris* cemetery at Lefkandi.[293]

3.4.2 Knossos North Cemetery

Location: In 1978, part of the University of Crete was built in an ancient olive grove, one kilometre northwest of the Minoan palace at Knossos. This area became known as the Knossos North Cemetery.[294] On the southern limit of the cemetery are the Fortetsa chamber tombs.

Context: Excavations in the Knossos region were initially conducted at the Khaniale Tekke tholos and other nearby tombs.[295] A decision to build the new University of Crete resulted in the discovery of the so-called *Dark Age* chamber tombs of the Knossos North Cemetery, known as the Tekke tombs.[296] These tombs mainly fall within the Protogeometric B and Orientalising (EO) chronological range, with only Tombs J and Q dated by the excavators to the Early Protogeometric period. The nearby Fortetsa area had been looted and is therefore excluded from this dataset.[297] Prior to the construction of the University of Crete's medical faculty in 1978, excavations revealed several Subminoan tombs, including an early cremation burial complex with three chambers holding Tombs 200 and 201; these are two of the richest Subminoan burials discovered in Crete and perhaps the oldest in the Knossos North Cemetery according to the excavators.[298]

[288] Krause 1975, pp. 57–66; Snodgrass 1980, p. 347.
[289] E.g., Kübler 1943, p. 32, pl. 39.
[290] Refer to Styrenius 1967, p. 109.
[291] Strömberg 1993.
[292] Popham *et al.* 1980, pp. 234, 245, 247.
[293] Catling 1985, p. 20.
[294] Coldstream and Catling 1996.
[295] Boardman 1967b; Hutchinson and Boardman 1954. Refer also to those tombs excavated by Brock (1957).
[296] These tombs are designated by the letters of the alphabet: Coldstream and Catling 1996, p. 2.
[297] See Coldstream and Catling 1996, p. 284.
[298] Coldstream and Catling 1996, pp. 191–195.

Material: The wide array of ceramics found in the tombs included lekythoi, amphoriskoi, oinochoai lekythoi, pyxides, pithoi, and stirrup jars. The richly furnished Early Protogeometric Tomb J was also distinguished by the inclusion of tripod cooking pots and an inscribed bronze bowl compared to Phoenician specimens,[299] while the abundant finds in Tomb Q included a unique horse/bird askos (although this object has a late Protogeometric date) and a curated Minoan larnax.[300] Amongst the status-laden objects recovered from the Subminoan burial complex were an ivory comb from Tomb 200 and a wealth of bronze objects from Tomb 201, such as a four-sided stand, a Naue II sword, and other weaponry.[301] Additionally, the latter tomb contained an iron knife, boar's tusk helmet plates, bone inlays, and ivory pieces.

Jewellery: Apart from a range of ceramic, stone, and vitreous beads, the tombs in the Knossos North Cemetery produced gold rings, beads, and foil ornaments; a series of iron pins; and bronze and iron fibulae.[302] Comparisons can be drawn between some of this Cretan jewellery and examples from Kerameikos and Lefkandi,[303] such as shield rings (nos. 1616 and 1629); other objects, such as the stamped foil rosettes (nos. 1617 and 1625), find parallels at Sellopoulo.[304]

3.4.3 Lefkandi

Location: The ancient settlement, now known as Xeropolis, is located immediately to the east of Lefkandi on a promontory on the south coast of Euboea, between modern Chalcis and Eretria. This promontory almost touches the east coast of the Greek mainland. Across a small bay from Xeropolis are five burial grounds; of these, the three main cemeteries are *Skoubris*, *Toumba*, and *Palia Perivolia*.

Context: Excavation of the tell revealed limited Late Helladic IIIB remains and an extensive Late Helladic IIIC settlement, with indications that a period of rebuilding and population increase occurred from 1200 BCE.[305] Three main stages of occupation can be identified at the site in Areas AA–LL:[306] Phase 1 is the earliest IIIC settlement, which had been destroyed by fire; Phase 2 was built soon after the burning of the previous phase and had new features, such as intramural burials; and Phase 3, during which the settlement contracted and may well have been abandoned. No Late Helladic IIIC cemetery has yet been discovered, although the excavators identified several burials dated to the Submycenaean and Early Protogeometric periods in the *Skoubris* cemetery.[307]

[299] Coldstream and Catling 1996, p. 30.
[300] Coldstream and Catling 1996, p. 51.
[301] Coldstream and Catling 1996, pp. 193–195.
[302] Coldstream and Catling 1996, iron pins: fig. 163, pl. 277; gold jewellery: fig. 153, pl. 265; beads: figs. 162, 164, pl. 275.
[303] See Catling 1996b, p. 531; Higgins 1980b, p. 221; Popham *et al.* 1980, pp. 197, 247.
[304] Popham and Catling 1974, p. 224.
[305] Catling and Lemos 1990; Evely 2006; Popham *et al.* 1980; Popham *et al.* 1993; Popham *et al.* 1996.
[306] Evely 2006.
[307] Popham *et al.* 1980, pp. 101, 103.

Material: Burials in the *Skoubris* cemetery are mainly cist tombs and pyres, as well as a few pit, shaft, and cremation burials.[308] These tombs contained an assortment of ceramics that included lekythoi, amphoriskoi, oinochoai, skyphoi, deep bowls, pyxides, askoi, and stirrup jars. A small quantity of hand-made pottery of non-Mycenaean type indicates that the Late Helladic IIIC inhabitants of Lefkandi may have sought to display foreign elements.[309] Some tombs were rich in metal offerings, such as *Skoubris* Tombs 16, 19, and 40. Some of the earliest iron knives in the Aegean come from Lefkandi; one recovered from the Phase II settlement might be a Cypriote import,[310] while another from *Skoubris* Tomb 46 was associated with an imported Syro-Palestinian dipper juglet.[311] Phase 1 levels in the settlement also produced reel-shaped loomweights of unbaked clay similar to those found in the southern Levant.[312] The questionability of assigning gender based on material assemblages is highlighted by the presence of an amour scale in the 'artifactually female' *Skoubris* Tomb 59[313] and the gold earrings in 'warrior' cremation *Toumba* Tomb 79.[314]

Jewellery: Submycenaean metal jewellery at Lefkandi has little stylistic connection to the jewellery of the Mycenaean period, or to that of Submycenaean Athens.[315] A striking increase occurs in the use of iron for jewellery during the Early Protogeometric period in a trend that increases further throughout the Protogeometric.[316] The largest category of bronze and iron objects consists of fibulae; these Submycenaean and Early Protogeometric fibulae are generally simple versions of the arch-bow and leaf-bow types.[317] The gold objects at Lefkandi are mainly in the form of wire hoops (nos. 1647–1648, 1657–1658, 1685). Other objects of significance include a spectacle-spiral pendant of copper alloy (no. 1638) and a shield ring (no. 1665).

3.4.4 Marmáriane

Location: Marmáriane lies within the foothills of Mount Pelion and Mount Ossa that bound the east side of the Thessalian plain in central Greece. The site is located approximately 20 kilometres from the modern capital, Larissa. Burials are located on the south-eastern slope and base of the tell.

Context: A tell composed of successive Bronze Age settlements with two tholos tombs dated to the Protogeometric was first examined in the late 19th century (Tombs V–VI),[318] with a further four tholoi excavated soon after (Tombs I–IV).[319] An overlap of Mycenaean

[308] Catling 1985.
[309] Popham *et al.* 1980, p. 7.
[310] Sherratt 2006, p. 308.
[311] Sherratt 2006, Appendix B.
[312] Evely 2006, p. 16.
[313] Popham *et al.* 1979, pl. 110.59:37.
[314] Popham and Lemos 1995.
[315] Higgins 1980b, p. 218.
[316] Catling and Catling 1980, p. 232.
[317] Catling and Catling 1980, pp. 234–235.
[318] Wace and Thompson 1912, pp. 53–54. Refer to Gallis 1979, p. 3.
[319] For bibliography, refer to Heurtley and Skeat 1930–1931, fn. 3.

forms with Protogeometric material at Marmáriane illustrates the lack of a Submycenaean period in the region. Heurtley and Skeat argue that the tombs demonstrate early Thessalo-Macedonian traditions along with motifs of Mycenaean ancestry, a fusion of elements indicative of the Protogeometric period in the Aegean from *ca.* 1000 BCE.[320] Lemos argues that the tombs belong to the Late Protogeometric/Subprotogeometric period despite material parallels elsewhere in Early Protogeometric contexts and the fact that most of the pottery dates from the 10th century BCE.[321] Other scholars compare the material found at Marmáriane to Middle Protogeometric material found at Lefkandi.[322] I have therefore assigned the objects from Marmáriane to the general Protogeometric period, corresponding to the later part of the Iron Age IIA, making these finds amongst the latest Aegean material in the dataset.

Material: Although Mycenaean stylistic features are evident in the pottery at Marmáriane, there are strong local traditions that are most likely derived from Macedonia. Three ceramics groups were found: (1) indigenous handmade types represented by jugs with cut-away or sloping necks, bowls with triangular handles, and one- or two-handled cups with parallels from a Late Cypriote III tomb in Cyprus (although these cups may have developed independently in the two regions);[323] (2) Mycenaean-type wares in the form of jugs with cut-away necks; and (3) local Protogeometric wheelmade forms, such as jugs with cut-away necks, trefoil lips, or tall necks and splaying lips; amphorai; one- and two handled cups; skyphoi; askoi; and stemmed kraters.[324] Concentric circles, latticed triangles, and lozenges are common decorative motifs. Additional material included a fully extended articulated skeleton in Tomb VI with a sword positioned near its hand; the hilt of the sword had been adorned with a necklace of glass beads and bronze studs.[325] The remainder of the skeletons were in contracted positions that suggest the survival of Late Bronze Age funerary traditions.[326]

Jewellery: All the tombs but Tomb IV contained jewellery. The finds from Tombs I and II consisted of a small number of copper alloy and iron objects, as well as some gold items in the latter tomb. Tomb III yielded objects of iron only, while Tombs V and VI contained jewellery made of copper alloy and iron. Amongst the objects with clear European antecedents are iron spectacle fibulae, these specimens marking the earliest-known appearance of this form in the Aegean (nos. 1717 and 1730–1731).[327] The *tremolo* ornament seen on nos. 1715 and 1722 also finds its inspiration to the north. Bangles with a similar decoration come from Protogeometric Tomb 14 in the *Palia Perivolia* cemetery at Lefkandi.[328]

[320] Heurtley and Skeat 1930–1931, pp. 45, 53.
[321] Lemos 2002, pp. 107, 113, fn. 78. Cf. pp. 115–117, 127.
[322] Catling and Catling 1980, p. 246. See also Romiopoulou 1971, p. 360.
[323] Daniel 1938, p. 65.
[324] Desborough 1972, p. 213.
[325] Heurtley and Skeat 1930–1931, p. 10.
[326] Heurtley and Skeat 1930–1931, pp. 12–13.
[327] Heurtley and Skeat 1930–1931, figs. 13 A–B, and 14–15. For parallels in Albania, see Papadopoulos *et al.* 2007, p. 121. *Contra* Benton 1950, p. 20.
[328] Catling and Catling 1980, p. 246.

3.4.5 Perati

Location: The important site of Perati lies on the eastern coast of Attica, at the foot of the hill with the same name, near the north end of the bay of Porto Rafti. It is strategically located along the maritime route of the Cyclades to the Dodecanese, and north to the Euboean Gulf. It is also located about 40 km from the lead and silver mines of Laurion, from which it possibly derived some level of prosperity.[329]

Context: Perati, discovered in the 1950s–1960s,[330] is known mainly for its Postpalatial cemetery, which yielded a carefully recorded sequence of burials dated to the latest part of the Late Helladic IIIB and throughout the Late Helladic IIIC (Phases 1–3), after which the cemetery was abandoned. The majority of the 120 tombs are chamber tombs, most with only one to three burials; in fact, 61 tombs contain only a single burial,[331] reflecting the tendency in the Postpalatial period towards single inhumation. One to three pits were also uncovered within 18 of these tombs.[332] Amongst these burials, and found within pits and urns, are the earliest known cremations in the Aegean.[333] The site also includes two 'warrior' tombs: Tomb 12 and Tomb 38 (Burial II or III).[334]

Material: The site yielded imported goods of Cycladic, Cypriote, Levantine, and Egyptian origin,[335] the nature of which suggest that the site enjoyed a period of stability in the 12th century BC.[336] Amongst these finds is an amulet from Tomb 24, inscribed in Cypro-Minoan characters.[337] Ceramic forms include (1) elaborate stirrup jars,[338] such as those decorated with painted birds;[339] (2) numerous conical bowls similar to those common at Lefkandi (while rare at sites such as Mycenae and Tiryns);[340] (3) deep bowls, which although less common, are likewise found at Perati and Lefkandi but not at Mycenae;[341] (4) kylikes, such as one found in Tomb 38, may relate to elite ritual practice;[342] (5) octopus stirrup jars, whose inspiration originates in Late Minoan IIIB examples from Crete;[343] (6) strainer jugs, found across the Aegean and into Sicily;[344] (7) a kernos of a type also found in Sicily;[345] and (8) a handleless metal chalice reminiscent of the one held aloft by the seated goddess on the gold signet

[329] Stos-Gale and Gale 1982; Crielaard 2006, pp. 281–282.
[330] Iakovides 1969–1970.
[331] Iakovides 1980, p. 10.
[332] Iakovides 1969–1970, pp. 14–15. Cf. Pits inside tombs at Kephallonia: Marinatos 1932, pp. 20–22.
[333] Iakovides 1969–1970.
[334] Deger-Jalkotzy 2006, p. 156. There is, in addition, a possible third warrior burial in Tomb 123.
[335] Iakovides 1980, p. 99; 1969–1970, pp. 314–316, 454–457, 469–470, pl. 37; Buchholz 1999, pp. 299–301; Cline 1990, p. 12, fn. 54; Deger-Jalkotzy 2002, pp. 61, 66, 68.
[336] The situation was similar for Ialysos and Koukounaries on Paros, indicating that the 12th century may not have been as bad as generally thought: Benzi 1992, pp. 222–223; Schilardi 1992; Morris 2000, p. 198.
[337] Iakovides 1969–1970, pp. 317–320, pl. 134.
[338] E.g., Mountjoy 1999, figs. 44:340 and 219:439.
[339] Iakovides 1969–1970, no. 779.170, figs. 23 and 55.
[340] Evely *et al.* 2006, p. 223.
[341] Evely *et al.* 2006, p. 224.
[342] Eder 2003, pp. 104–108.
[343] E.g., Iakovides 1969–1970, p. 148, fig. 23.
[344] Vagnetti 2000–2001, p. 111.
[345] Iakovides 1969–1970. Cf. Rizza 1962, p. 13–15.

ring from the Tiryns Treasure.[346] Cultural links with the Levant are demonstrated by the presence of ceramic mourning figurines.[347] Some of the earliest iron appears in the form of bi-metallic knives from Tombs 28 and 38 of Cypriote type.[348] Other weaponry consists of swords from Tombs 12 and 38.[349] Tweezers and mirrors, also found within Tombs 12 and 38, are typically associated with elevated rank.[350] Amongst the other finds were combs,[351] perhaps as the result of Cypriote influence;[352] buttons, particularly of stone;[353] hundreds of *Conus* shells with labial perforations;[354] and a collection of 24 amulets, of which 17 were of Egyptian origin.[355]

Jewellery: The objects include the early appearance of iron jewellery, and a rich array of gold and silver, in fact, the jewellery assemblage includes 54 silver rings, uncommon elsewhere in the Aegean.[356] A finger ring formed of a single wire terminating in a S-spiral bezel demonstrates a northern influence (no. 1737.071).[357] Cypriote influence can be seen in some jewellery types, particularly bucrania (nos. 1737.029, 1737.057, and 1737.134), while a Near Eastern influence can be seen in disc (nos. 1737.120–1737.122) and crescent (nos. 1737.055 and 1737.123) pendants.[358] Of the 375 beads discovered at the site, 145 are of gold, with 87 of these comprising a necklace that was discovered in Tomb 147 (no. 1737.144),[359] nonetheless, there is a noticeable absence of Mycenaean gold relief beads.

3.4.6 Sellopoulo

Location: The village of Sellopoulo lies approximately two kilometres north of Knossos, bordering the east bank of the Kairetos River. Surrounding the area are hilly outcrops of soft limestone. On the opposite side of the River is the Zafer Papoura cemetery.

[346] Matthäus 1980, p. 257, pl. 43:365. On the Tiryns ring, refer to Karo 1930, p. 120; Maran 2006, pp. 132–134, fig. 8:1.

[347] Iakovides 1969–1970, pp. 267–268, pls. 51b and 177b. These figurines are often seen as a links between the Aegean and Philistia: Dothan and Dothan 1992, p. 200; Ben-Shlomo and Press 2009, p. 48.

[348] Sandar's Type G and Kilian-Dirlmeier's Type F2: Sherratt 1994, pp. 68–69; Karageorghis 1982, p. 299.

[349] Iakovides 1969–1970, p. 360, figs. 158 (Tomb 12) and 280 (Tomb 38).

[350] Iakovides 1969–1970, pp. 119–122, 304, 455, pl. 36.

[351] Iakovides 1969–1970, pp. 286–288, fig. 126.

[352] Catling 1996, p. 533.

[353] Iakovides 1977, pp. 113–119; Iakovides 1969–1970, pp. 277–281, pls. 74b and 87b.

[354] Iakovides 1969–1970, pls. 56b, 109b, 109g, 135a, 136b. For further discussion, refer to Section 6.1.2.4.

[355] Iakovides 1969–1970, p. 84.

[356] This is not surprising given its proximity to the silver mines of Laurion. For lead isotope analysis of these rings, see Stos-Gale (1982).

[357] Cf. examples from Kerameikos and Lefkandi: Lemos 2002, p. 116; Desborough 1972, pp. 303–304. Regarding their northern European origin, refer to Giannopoulos 2009, pp. 122–125.

[358] M206–209 from Tomb 147: see Iakovides 1969–1970, pp. 84, 315–316, pl. 37; Buchholz and Karageorghis 1973; Buchholz 1999, pp. 299–301.

[359] The site also yielded 116 beads of glass and faience: Nightingale 2010. These included four modest necklaces of mixed materials discovered *in situ* (one each in Tombs 24 and 94, and two in Tomb 147): Iakovides 1969–1970, p. 455, pls. 180β, IVδ, and 36α, β.

Context: A single tholos tomb was first excavated in the southwest of the village in 1900,[360] followed in the mid 1900s by explorations to the south uncovering several Late Minoan III burials.[361] Upon receiving notification of a collapsed tomb near these burials several years later, archaeologists revealed Late Minoan IIIA finds in Chamber Tombs 3 (north of an east–west aligned gully) and 4 (south of the gully).[362] Extensive trial trenches in the area failed to locate further burials. Tomb 3 had been plundered, whereas Tomb 4 remained relatively intact despite water damage and a collapsed roof. The latter tomb contained three burials that the excavators date to the Late Minoan IIIA period, *ca.* 1400–1350 BCE.[363] Meanwhile, a scarab with the cartouche of Amenophis III provides a *terminus post quem* of 1417–1367 BCE.[364]

Material: Sellopoulo produced a rich array of burial goods in the form of bronze and silver objects, such as tripod cauldrons, bowls, a jug with a bird protome on the rim, a razor, blade, and mirrors; ceramics, such as kylikes, cups, a shallow bowl, a piriform jar, and a stirrup jar; and bronze weapons and tools, such as a cruciform sword with a pommel of ivory with gold trimmings, and a 'fishing spear.'[365] The metal finds have a distinctly military character and are suggested to be burial offerings for Mycenaean warriors.[366] The objects, particularly from Tomb 4, are notably similar to those found at Zafer Papoura,[367] and to those on the mainland found at Tombs 2 and 12 at Dendra[368] and the tholos tomb at Vapheio.[369]

Jewellery: Jewellery from Tombs 3 and 4 at Sellopoulo were all of gold. The only metal items of jewellery recovered from Tomb 3 were a scatter of perforated gold foil rosettes. Within Tomb 4, Burial I contained a large concentration of gold rosettes and clusters of gold beads of both plain and relief types.[370] The jewellery from Burial II also consisted of gold relief beads, along with tassels of gold foil.[371] As in Burial I, a scatter of rosettes around and below the body in Burial III indicates that a shroud once wrapped the deceased.[372] Such rosettes also occur at the Knossos North Cemetery,[373] and in the Argolid at Dendra and Mycenae.[374] Finger rings nos. 1739–1741 in Burial I of Tomb 4 have parallels at Kalyvia,[375] Zafer Papoura Tomb 7,[376] Vapheio,[377] and Isopata Tomb 1.[378] The ritual

[360] Hogarth 1899–1900, p. 81.
[361] Hood 1957, p. 24; 1958.
[362] Popham 1973; Popham and Catling 1974.
[363] Popham and Catling 1974, pp. 196, 206. The tombs may actually be of a later date given the innovations in T-shaped dagger hilts and the decorative band on a bronze oinochoe: see pp. 250, 253.
[364] Popham and Catling 1974, p. 254.
[365] Popham and Catling 1974, p. 202.
[366] Popham and Catling 1974, pp. 255–256; Treherne 1995.
[367] Evans 1906.
[368] Matthäus 1979; Popham and Catling 1974, p. 253.
[369] Popham 1973, p. 271; Popham and Catling 1974, pp. 221–222; Banou and Hitchcock 2009, p. 12.
[370] Popham and Catling 1974, pp. 199–200.
[371] Popham and Catling 1974, pp. 202, 210, 223, fig. 11P, F-G, pl. 36g.
[372] Popham and Catling 1974, p. 203, fig. 6.
[373] Coldstream and Catling 1996, pp. 530–531.
[374] Persson 1942; Wace 1932, pl. 32.
[375] Savignoni 1904, pp. 522, 577, figs. 12 and 50.
[376] Evans 1906, fig. 21.
[377] Tsountas 1889, pl. 10.39; *Corpus der Minoischen und Mykenischen Siegel.* Vol. I, p. 219.
[378] *Corpus der Minoischen und Mykenischen Siegel*. Vol. 6, pp. 269–275.

scene on one ring (no. 1741) is a fine example of baetyl and bird imagery,[379] while a granulated ring decorated with cloisons of tricurved arches and traces of coloured glass inlay (no. 1739) exhibits a high standard of workmanship.[380]

3.5 REGIONAL SITE SURVEY: CYPRUS

Five sites from Cyprus are summarised below, once again in alphabetical order: Enkomi, Hala Sultan Tekke, Kouklia/Palaepaphos, Maroni, and Pyla-*Kokkinokremos*.

3.5.1 ENKOMI

Location: The prosperous Late Bronze Age coastal site of Enkomi is situated on the east coast of Cyprus. The harbour settlement, seen as the gateway between the Near East and the Aegean,[381] was ideally positioned for trading relationships with neighbouring regions.

Context: Multiple archaeological missions excavated at Enkomi during the late 19th and 20th centuries,[382] and this site remains one of the most comprehensively excavated in Cyprus; levels date from Middle Cypriote III/Late Cypriote I–IIIA, although most of the architecture dates to Late Cypriote II–III. The site appears to have been abandoned *ca.* 1050 BCE. Level IIB corresponds to Late Cypriote IIC (*ca.* 1300–1200); Level IIIA corresponds to Late Cypriote IIIA, or the Late Bronze Age–Iron Age IA transition in the southern Levant; and Levels IIIB–C correspond to the latter portion of the 12th century.[383] The main area of metal production was in Quartier IW (Area III), although structures associated with metallurgical activity were also discovered in Quartiers 4W and 5E.[384] A vast quantity of material was recovered from 185 intra-settlement burials at Enkomi; of this material, a very large representative sample is included in the dataset, consisting of (1) all material that I could physically examine, and (2) all material for which there is sufficient data in the British Museum's database. These objects have dates assigned by the various missions to Enkomi: British (Br.), Cypriote (Cyp.), French (Fr.), and Swedish (Sw.).[385] Some of these dates span the Late Cypriote period, although Goring specifically dates the gold jewellery

[379] Niemeier 1990, p. 218, fig. 14D, pl. 37a and 37e; Popham and Catling 1974.

[380] Andrews 1990, p. 88. For Late Bronze Age examples of *cloisonné* in the southern Levant, see Loud 1948, pl. 225:12–13; Tufnell 1958b, pl. 25:9; Tufnell *et al.* 1940, pl. 36:102. Cf. enamel inlaid rings from Kouklia: Karageorghis 1968, pl. 80.

[381] E.g., Bell 2005, pp. 366, 368; Crew 2004, pp. 271–283; and Karageorghis 1986; 2002.

[382] Courtois 1984; Courtois *et al.* 1986; Schaeffer 1952; Dikaios 1969–1971; Murray *et al.* 1900; Gjerstad *et al.* 1934.

[383] There is some dispute about the end date of the Late Cypriote IIC: Åström, P. 2007, p. 506, Table 1; Dikaios 1969–1971, p. 487; Mountjoy and Gowland 2005, p. 165, Table 7; Mountjoy 2010.

[384] Dikaios 1969–1971, pp. 18–34; Courtois 1982, pp. 155–158; Courtois *et al.* 1986, pp. 8–13.

[385] There is a bias towards gold objects, although objects in other metals do occur, particularly in stratified contexts: see Courtois 1984; Åström, L. 1972, pp. 488–499. It was not possible within the constraints of the present study to include all the material from Enkomi.

within some tombs to the Late Cypriote III period (British Tombs 2, 47, and 61, and French Tombs 6 and 13), and Keswani additionally dates some other tombs specifically to the Late Cypriote III (British Tombs 15, 16, 22, 24, and 58, French Tomb 15, and Swedish Tomb 19).[386]

Material: A large 'Fortress' built in Quartier IW during Late Cypriote I is seen as evidence of a centralised organisation supporting the settlement's large-scale copper industry.[387] The archaeometallurgical evidence from Enkomi indeed points to centralised control at this site.[388] Over 200 seals and a large quantity of signet rings found at the site indicate that Enkomi was a centre of glyptic production used for just such organisational control.[389] During the Late Cypriote II period, cult buildings were paralleled by the appearance of monumental administrative buildings, such as the 'Ashlar Building' in Quartier 4W. Following the destruction of the rich Late Cypriote IIC level at the end of the 13th century, the site was reoccupied in Late Cypriote IIIA. This period of destruction arguably relates to the arrival of *Sea Peoples*, or to an episode (or episodes) of political and economic collapse.[390] The rich material culture introduced in Level IIIA at this time includes rectangular hearths,[391] an Aegean-style torch,[392] Naue II swords,[393] and inscribed objects.[394] In Level IIIB, we see the arrival of locally produced Mycenaean IIIC-style pottery [395] and the well-known 'Horned God' figurine from Quartier 1W.[396] The site also contained several metal hoards,[397] bi-metallic knives,[398] and notched scapulae,[399] and was abundant in luxury items of various forms.[400] Foreign influences are demonstrated at Enkomi by the local manufacture of Canaanite storage vessels, the presence of imported Canaanite-style jars manufactured in Egypt,[401] and the Near Eastern-style 'Griffin Slayer' on a mirror handle from Enkomi Tomb 17.[402] Tomb types vary, and collective chamber tombs, ashlar-built tombs, and tholos tombs give way to individual burial in shaft graves from the Late Cypriote III.

Jewellery: The burials display a high level of wealth in the deposition of large amounts of gold.[403] Several female burials at Enkomi are especially rich in gold jewellery; one of

[386] Goring 1983b; Keswani 2004.
[387] Hirth 1978, pp. 35–45; Keswani 1996, p. 222; Muhly and Muhly 1989, p. 299. *Contra* Crew 2004, p. 281.
[388] Muhly and Muhly 1989, pp. 299–303; Webb 1999, pp. 292–294.
[389] Webb 2002, p. 140.
[390] For an overview and references, refer to Knapp 2008, pp. 250–252.
[391] Karageorghis 1998a.
[392] Karageorghis 1986.
[393] Karageorghis 2000, pp. 260, 265.
[394] Åström, L. 1972, p. 771; Vetters 2011.
[395] Dikaios 1969–1971, pp. 509–523.
[396] Dikaios 1969–1971, pp. 18–34.
[397] Knapp 1988, Table 2.
[398] Refer to Sherratt 1993, Appendix I.
[399] For references, refer to Zuckerman *et al.* 2007.
[400] Refer to Goring 1989.
[401] Åström, P. 1992, p. 68; Eriksson 1995.
[402] Murray *et al.* 1900, p. 31; Krzyszkowska 1992, fig. I.a, pl. 14.a; Sandars 1978, n. 38, fig. 97.
[403] E.g., French Tombs 13, 15, and 16: Schaeffer 1936, pp. 141–142; Keswani 2004, p. 97.

the most abundantly furnished tombs was Swedish Tomb 18.[404] Despite depictions in the Swedish publications of copper alloy bangles and rings from contexts such as Tomb 18, no data is available for these objects.[405] Foil diadems and mouthpieces decorated with embossed motifs are plentiful (for example, nos. 1822, 1824–1826, 2018–2021), as are wire hoop earrings (for example, nos. 1870–1977, 1952–1953), strip-twisted earrings (for example, nos. 1802–1803, 2013–2014), and earrings with bucrania pendants (for example, nos. 1830–1831, 2154, 2029–2031). Some items of jewellery display signs of use-wear, while others were evidently produced for funerary deposition.[406]

3.5.2 Hala Sultan Tekke

Location: Hala Sultan Tekke is located near the Larnaca salt lake in southeast Cyprus. A Bronze Age necropolis at *Dromolaxia* in the Trypes locality lies about one kilometre west of Hala Sultan Tekke near the southern coast of Cyprus. The site was a key port and an important trading centre located near the copper mines of the Troodos Mountains to the northwest.

Context: A series of excavations commenced at Hala Sultan Tekke at the end of the 19th century; these excavations revealed over 50 tombs and several wells, as well as a sequence of occupation from Middle Cypriote III–Late Cypriote IIIA.[407] Bailey studied and dated the material excavated during these early explorations in order to display the collection in tomb groups at the British Museum. In the mid-20th century, multiple burial Tombs 1 and 2 were excavated near the west shore of the Larnaca Lake;[408] several years later rescue excavations were carried out in the Trypes area after bulldozing revealed new tombs.[409] The excavators dated these tombs to Late Cypriote II (*ca.* 13th century) and many specifically to Late Cypriote IIB.[410] Another rich Late Cypriote III shaft grave (Tomb 23) was discovered using metal detectors.[411] Excavations, mainly in Area 8, have failed to locate any monumental architecture,[412] although a Late Cypriote IIIA jewellery hoard was discovered in Area 8 East.[413] Like Enkomi, Hala Sultan Tekke seems to have survived the destruction other sites experienced at the end of the Late Bronze Age, but was then was abandoned, either as the result of environmental causes[414] or socio-political and economic factors.[415]

[404] Keswani 2004, p. 126. Cf. Tomb 11 at Kalavassos-Ayios Dimitrios: Goring 1996; South 2003.
[405] E.g., Gjerstad *et al.* 1934; 1935; Gjerstad 1948.
[406] Gjerstad 1948, p. 138; Lagarce and Lagarce 1986, pp. 117–122; Goring 1989, p. 103; Keswani 2004, p. 138.
[407] Bailey 1976, pp. 4–5, 23; Åstrom 1985, p. 174.
[408] Karageorghis 1976.
[409] Åström, P. 1977.
[410] Witzel 1979.
[411] Niklasson 1983, pp. 169–185.
[412] Hult 1978; 1981. Refer also to Webb 1999, pp. 127–130.
[413] Åström, P. 1983, pp. 8–11.
[414] For discussion and references, see Iacovou 2013, p. 599.
[415] Knapp 2008, p. 246.

Material: The quality of the finds indicates the burial of prominent individuals, perhaps traders and their families given the region's close trading connections with neighbouring regions — in particular, Mycenaean Greece, but also the Near East.[416] Burials at the site are comparable in luxury to burials from Enkomi, albeit of a more limited quantity.[417] Cross-cultural influences in Late Cypriote IIIA contexts are demonstrated by the presence of Canaanite storage jars;[418] Egyptian ceramics;[419] locally-made four-sided bronze stands, said to be of an Aegeo-Levantine form;[420] and Aegean-type standing female Psi figurines, also familiar from Philistine contexts.[421]

Jewellery: The jewellery assemblage from Hala Sultan Tekke includes artefacts with Aegean, Egyptian, Hittite, and Syro-Palestinian features.[422] One of these items is a trilobite pendant earring (no. 2175i) with almost identical 13th century parallels in the southern Levant.[423] A Hittite influence can be seen in an incised ring that depicts an altar flanked by two antithetic griffins facing two figures on either side, and a tree at each end of the scene (no. 2246), while the presence of a stirrup ring incised with symbols such as a lotus sceptre, a *djed* pillar, and a flail (no. 2188) and a scarab ring incised with the personal name *Nbwy* (no. 2179) point to Egyptian origins. A pair of twisted hoop earrings made by placing two rows of plaited strips of gold sheet side-by-side (nos. 2176–2177) are a unique variation on the Cypriote strip-twisted earring common at Enkomi. The capped beads from Tomb 23 were positioned at the neck of a deceased male, indicating that they formed part of a necklace.

3.5.3 Kouklia/Palaepaphos

Location: The modern village of Kouklia in the Paphos region of Cyprus is located one kilometre inland from the coast and just over one kilometre southwest of Palaepaphos, famous for its Sanctuary of Aphrodite.[424] The names Kouklia and Palaepaphos are often interchangeable in the literature. Cemeteries in the surrounding region are found at *Skales*, *Evreti, Mantissa*, *Kaminia*, *Asproyi*, *Tertsoudhia*, and *Eliomylia*.

Context: Tombs excavated from the late 19th century reveal evidence of Late Bronze Age and Early Iron Age occupation.[425] Although the focus of archaeological work at Kouklia was the excavation of Archaic to Roman material, a Late Cypriote IIC–IIIA monumental building (Sanctuary I) was also revealed. Cemeteries at *Evreti*, *Asproyi*, *and Kaminia* were

[416] Witzel 1979, p. 197.
[417] Keswani 2004, p. 143.
[418] Åström, P. 1986, p. 65. See also Åström, P. 1992 and Barako 2000, p. 516.
[419] Åström, P. 1983, pp. 172–173, nos. 1220–1222.
[420] Catling 1964, p. 209; Karageorghis 1989.
[421] Ben-Shlomo and Press 2009, pp. 42, 47.
[422] Niklasson 1983; Jacobsson 1994, pp. 32–33; van Wijngaarden 2002, p. 346.
[423] For references, refer to Section 4.3.3.1.
[424] Maier 1975, p. 77.
[425] Catling 1968, fn. 4; Cesnola 1991 [1877], pp. 204–216; Gardner 1988.

excavated from the early 1950s, and fieldwork recommenced at Kouklia in 1966 after the remains of a looted tomb were recovered after being sold outside the village.[426] Ground-levelling for agricultural purposes in 1979 also revealed a number of tombs that required immediate excavation. Karageorghis dated both Kouklia and Alaas to no later than the Late Cypriote IIIB period, and noted the similarities between the material from both sites,[427] although the *Skales* cemetery dates to the Cypro Geometric period, or at the earliest, Late Cypriote IIIB.[428]

Material: The wealth of the area, known already from the ashlar architecture at the sanctuary of Palaepaphos, is not dissimilar to that of Enkomi and Kition. Most burials at Kouklia were chamber tombs and contained inhumations, generally in the form of multiple burials. Only two instances of cremation are attested in the earliest tombs at *Skales*, and infants were buried in jars.[429] Tomb 8 at *Evreti* offers a rare example of a rich Late Cypriote IIIA burial. The quality of the finds in the tombs in general testifies to the importance of the site as a flourishing centre during the Late Bronze Age. Heavy Canaanite storage jars demonstrate Levantine influence, and a unique jar is decorated with a palm tree that is clearly a Levantine motif.[430] Other imported forms include pilgrim flasks, red ware, and globular jugs. One of the earliest iron knives found in Cyprus comes from a Late Cypriote IIIA (or perhaps Late Cypriote IIC–IIIA) tomb in *Eliomylia*.[431] Early Iron Age material recovered from the *Skales* cemetery has led to considerable debate about the possible ethnic origins of the tombs' occupants;[432] amongst this material are a bronze *obelos* incised with Cypriote syllabic script from Tomb 49 and metal bowls with protomes (also from Tomb 49), as well as both locally produced and imported Phoenician vessels.[433]

Jewellery: In most cases, metal jewellery at Kouklia is associated with female burials and for the most part it is unremarkable. The objects are typically constructed from thin sheet gold, such as a few poorly constructed bossed sheet rings (nos. 2325, 2327–2327), foil plaques (for example, nos. 2267, 2283–2286, 2324, 2329–2332), and mouthpieces (nos. 2323 and 2333). When made of solid gold, objects are usually made of thin wire (e.g., nos. 2306–2307).[434] The assemblage includes a pair of rarely-seen bracelets (nos. 2262–2263) and a silver D-shaped fibula (no. 2271), one of the few Cypriote fibulae in the database. Fibulae appear in Cyprus during the 12th century BCE, not long after their introduction in the Aegean, but are notably absent in the dataset.[435]

[426] Karageorghis 1967; Maier and von Wartburg 1985.
[427] Karageorghis 1975, p. 67; Karageorghis 1967, p. 23.
[428] Karageorghis 1983.
[429] Cremations were found in T. 83 and T. 89: Karageorghis 1983, pp. 7–8.
[430] Karageorghis 1983, p. 398.
[431] Karageorghis 1990, pp. 86–87.
[432] Refer to Knapp 2008.
[433] Negbi 1992, p. 605.
[434] Goring 1983a, p. 422.
[435] For a comprehensive treatment of this category of clothing attachment, see Giesen 2001, pp. 40–55.

3.5.4 Maroni

Location: The village of Maroni is situated on the southern coast of Cyprus approximately 35 kilometres southwest of Larnaca, in a hilly area dissected by river valleys. The site of *Tsarroukas* is approximately three kilometres to the southeast, on and behind a low cliff along the coast. Other sites in the area included *Vournes*, 500 metres to the northwest of *Tsarroukas*, and *Bamboula* and *Kapsaloudhia* nearby.

Context: First excavated in the late 19th century, Maroni was thought to be ancient Marium.[436] The archaeological team uncovered 26 Late Bronze Age tombs at *Tsarroukas*, but left behind minimal records.[437] Johnson went some way in interpreting the results of these excavations in a study of the Maroni material held at the British Museum.[438] At *Vournes* were another two tombs. A single disturbed Cypro-Archaic I tomb yielding no jewellery was also excavated in 1971.[439] In addition, a Late Cypriote IA tomb was located in 1983 at *Kapsaloudhia* close to *Vournes*.[440] Following renewed excavations from 1981, it became apparent that Maroni was indeed a major administrative centre in Late Cypriote IA–II Cyprus, with the monumental 'Ashlar Building' at *Vournes*, and perhaps acted as a port or trading location.[441] More recently, investigations have relocated the *Tsarroukas* cemetery and gone some way toward interpreting the British Museum's 19th century work at the site.[442]

Material: The material discovered in the 'Ashlar Building', such as pithos sherds, basins, sunken pithoi, storage vessels with Cypro-Minoan inscriptions, copper oxhide ingots, and balance scales, suggests storage and administration were important functions of the structure.[443] The building was destroyed and the settlement abandoned at the end of the Late Cypriote IIC during a period of collapse and destruction across the island. Non-local material recovered from the *Tsarroukas* and *Vournes* tombs that might be seen as prestige goods include Mycenaean pottery, such as kraters, piriform jars, and stirrup jars;[444] a hedgehog rhyton; a psi figurine; and numerous bull figurines.[445]

Jewellery: The metal jewellery assemblage from Maroni includes many typical Cypriote forms, such as earrings with bucrania pendants (nos. 2342–2343, 2364), foil diadems (nos. 2349 and 2347), and hoop earrings (nos. 2369–2370). A Cypriote object demonstrating an Egyptian influence is the stirrup ring engraved with a seated figure (no. 2348). The finds also include a unique silver wire bracelet with terminals that spiral around each other, holding a gold prism between the spirals (no. 2358).

[436] Manning *et al.* 1998.
[437] Cadogan 1992. In fact, only those tombs considered elite were recorded; skeletal remains and architectural features were likewise ignored: Manning *et al.* 1998, p. 348.
[438] Johnson 1980.
[439] Christodoulou 1972.
[440] Cadogan 1984, p. 2.
[441] Manning *et al.* 1998, p. 298.
[442] Manning *et al.* 1998.
[443] Manning *et al.* 1998; Cadogan *et al.* 2009.
[444] Manning *et al.* 1998; Steel 2004.
[445] Johnson 1980.

3.5.5 Pyla-Kokkinokremos

Geography: Pyla-*Kokkinokremos* is located on a rocky plateau on the southwest coast of Cyprus, overlooking the Larnaca Bay. The site lays 10 kilometres northeast of the modern city of Larnaca in what is now the United Nations Buffer Zone. The small site may have been the outpost for a larger urban centre in the region.[446]

Excavation: The site was first discovered in 1952 following the appearance of illicit artefacts on the antiquities market.[447] Soon after, a short excavation was conducted in Area I, which was determined to be the source of the artefacts.[448] The site was re-examined by Karageorghis in two short seasons in the early 1980s.[449] The location of Pyla-*Kokkinokremos* overlooking the bay, and the possible identification of a defensive wall, led Karageorghis to believe that the site served a defensive purpose.[450] Alternatively, the site may have functioned as an industrial, residential, and administrative centre associated with the movement of goods between the coast and inland settlements.[451] Originally dated as contemporary with Level IIIA at Enkomi (corresponding to Late Cypriote IIIA), Pyla-*Kokkinokremos*' chronology has since been adjusted based on comparisons with both Kition and Maa-*Palaeokastro*; the site is now thought to have been occupied for two short periods, Late Cypriote IIC and Late Cypriote IIIA, or just before and just after 1200 BCE, when the site was abandoned in haste.[452]

Material: Cultural material at the site demonstrates Aegean traditions; this includes an Aegean-style torch that may have been used as a signalling device, as well as Aegean pottery, a central hearth, a bathtub, and horns of consecration imagery on a limestone trough.[453] A military association for the Aegean-style torch is also suggested for similar objects found in Stratum VI at Beth Shean.[454] Metallurgical activity at Pyla is represented by a bronze hoard from Complex B (found associated with oxhide ingots and bronze scrap),[455] also known as the 'Founder's Hoard', and two silver ingots dated to the end of the Late Cypriote IIC.[456] The presence of a scale of armour in the bronze hoard has led to comparisons with Aegean and Near Eastern depositions, and to the suggestion that such scales held ritual or symbolic significance.[457]

Jewellery: The so-called 'Goldsmith's Hoard' from Area 1 contained single earrings, incomplete sets of beads, and gold foil, as well as folded raw material and a cutting tool that may

[446] Karageorghis 1998b, pp. 127–130.
[447] Megaw 1953, p. 134.
[448] Dikaios 1969–1971, pp. 895–907, 911.
[449] Karageorghis and Demas 1984.
[450] Karageorghis and Demas 1984, pp. 68–75.
[451] See Knapp 2008, pp. 238–239.
[452] Knapp 2008, pp. 60–65.
[453] Karageorghis 1998a; 1998b, p. 129.
[454] Karageorghis 1999.
[455] Karageorghis and Demas 1984, pp. 12, 55–57.
[456] Karageorghis *et al.* 1983; Gale and Stos-Gale 1984.
[457] Maran 2004.

have been part of a goldsmith's kit.[458] Of the jewellery, the earring pendants in the form of a bucranium are common in the Late Cypriote IIC–IIIA period (nos. 2384–2385), whereas examples with granulated rings around the muzzle (no. 2377–2378, 2383) have no known parallels.[459] Of the relief beads, two plano-convex lentoid beads are also unique (no. 2387).

3.6 DISCUSSION

The cultural material from the 29 sites in the dataset is rich and varied, and often displays identifiable local traditions. The traditional view of population movements eastward through the Mediterranean at the close of the Late Bronze Age implies that the material culture, or at least the influence, of Aegean and Cypriote peoples would likewise have been carried east; however, the site survey indicates that (1) most metal items of jewellery in the southern Levant suggest links to local traditions; and (2) non-local influence is limited to the (very) occasional Aegean, Anatolian, Cypriote, or Egyptian feature. While the rarity of foreign characteristics in Levantine jewellery may reflect a strategy of integration and co-operation between *Sea Peoples* and the local population, at least within Philistia,[460] the notion of such a strategy does not adequately account for the foreign characteristics that do appear in the corpus.

In general, the distribution of jewellery types demonstrates that while there were trends in adornment practices across the southern Levant, no uniform pattern is evident. Changes in jewellery during the Late Bronze Age–Early Iron Age transition were often site-specific, and the material associations of jewellery varied from site to site. Furthermore, intriguing similarities between jewellery at sites in Philistia (or sites with Philistine material) and Transjordan warrant further attention. Despite the appearance of a small quantity of non-local jewellery at several sites, it is not possible to identify any clear *patterns* of non-local influence on adornment behaviour in the Levant.

[458] Karageorghis and Demas 1984.

[459] For discussion of granulation techniques, refer to Lilyquist 1993; Ogden 1982, pp. 58–70; Politis 2001; Prévalet 2010.

[460] Yasur-Landau 2010, p. 288.

CHAPTER 4

CATALOGUE AND TYPOLOGY

Having discussed the selection of sites in the preceding chapter, it is now possible to present the catalogue and typology of metal jewellery. First is a brief outline of the process behind the creation of the catalogue, which required the collection of an enormous amount of data from Iron Age I–IIA sites in the southern Levant (that is, from Philistia, Cis-, and Transjordan), the Aegean, and Cyprus. These items are described in Catalogues A (context and publications) and B (description and dimensions) in Appendix C.

The primary purpose of this chapter is to present a typology of the jewellery of the southern Levant and its western neighbours, based on the data collected from each of the 29 sites in the dataset. The typology is organised into seven categories: (1) *earrings*; (2) *rings*; (3) *bangles*; (4) *pendants*; (5) *beads*; (6) *clothing attachments*; and (7) *foil ornaments.* Each of these categories is divided into types; for instance, the earring category includes lunates, lunates with attachments, hoops, and so on. These types are further divided into subtypes; for instance, the lunate type of earring includes small, plain lunates with a short hoop, or small, plain lunates with an elongated hoop. Notice that the typology includes no category for necklaces, as necklaces (and some bracelets) are usually composite objects reconstructed from beads and pendants, often in the absence of *in situ* evidence. There is some temptation to string beads into 'recreated' necklaces, but these recreations are often modern conjectures, and the scattered material in the burials from which they most often derive provides little support for these interpretations.[1] Therefore, components of necklaces are classified in this dataset according to the categories of the components themselves, such as 'beads' and 'pendants'.

By drawing on the typology and catalogue, several major observations about each of the seven main categories of jewellery contained in the typology can then be made.

4.1 MULTIREGIONAL CATALOGUE

I have compiled a catalogue of 3900 pieces of metal jewellery from 29 key sites in the eastern Mediterranean.[2] Naturally, this catalogue is not an exhaustive inventory of Early Iron Age eastern Mediterranean metal jewellery — but it is a significant foundation for such an

[1] Basic reconstructions include those for Sellopoulo (no. 1746): Popham and Catling 1974, fig. 11e, pl. 35b; Kerameikos (no. 1587): Ruppenstein 2007, fig. 11; Hala Sultan Tekke (no. 2225): Niklasson 1983, fig. 471; and Enkomi (no. 1829): Marshall 1911, p. 670; Crewe *et al.* 2009, no. 19.87; Goring 1983b, no. 526. There are no accurate reconstructions for the southern Levant. Nonetheless, we can assume that finds consisting of multiple beads of the same type probably represent necklaces, such as those from *Philistine* Tomb 532 (no. 429), Tomb 846 (no. 540), Tomb 205 (no. 587), and Tomb 241 (no. 713) at Far'ah; from Tomb 62 (no. 844) and Stratum VIIA (no. 779) at Megiddo; from Tomb 32 at Nasbeh (no. 946); and from Tomb 101 at Sa'idiyeh (no. 1399).

[2] I have personally examined 30.6 per cent (or more than 1100) of these objects, while information on the remaining objects comes from the relevant literature.

exhaustive inventory, because this catalogue is by far more extensive than any other catalogue of these artefacts ever compiled in the past. In that sense, this catalogue is an important tool for discerning interregional patterns in the use of metal jewellery for adornment. Due to the quantity of data recorded for each object, the catalogue is divided into two parts: (Catalogue A) an object's date, stratigraphic details, and publication information; and (Catalogue B) an object's form and dimensions. Both of these catalogues are located in Appendix C.

Catalogue A lists the objects' find context and current location in order by inventory number, then alphabetically by site and region. This information is collected from Ashdod*, Azor, Gath, Qasile*, Beth Shemesh, Beth Shean, 'Eitun, Far'ah, Megiddo, Nasbeh, Taiyiba, Baq'ah Valley, Deir 'Ain 'Abata, Madaba, Sahab, Sa'idiyeh, Tawilan, Kerameikos, Knossos*, Lefkandi*, Marmáriane, Perati, Sellopoulo*, Enkomi, Hala Sultan Tekke, Kouklia/Palaepaphos, Maroni, and Pyla-*Kokkinokremos*.[3] The arrangement of each catalogue entry in Catalogue A is:

- Inventory number;
- Site;
- Geographic region;
- Period;
- Provenance (stratum/tomb number);
- Excavation number;
- Excavation area;
- Locus;
- Basket (field registration) number;
- Museum;
- Museum registration number;
- Item category;
- Material;
- Bibliography (this is limited to the main publications); and
- Illustration number.

Catalogue B also lists every object in order by its inventory number and includes a description and object dimensions if available. The data description in Catalogue B naturally varies from site to site according to the availability of information for each object. For example, data is more readily available for sites excavated in recent years than for sites excavated on behalf of the British Museum at the end of the 19th century.[4] As stated previously, jewellery from funerary contexts predominates; nonetheless, useful conclusions as to developments in style, chronological and geographical distribution patterns, cultural affinities, and socio-economic differentiation can be drawn from the catalogue to create a representative picture of individual and group behaviour for the southern Levant and the broader region. The arrangement of each catalogue entry in Catalogue B is:

[3] Sites marked with an asterisk (*) indicate that no material was available for physical examination and hence I am solely reliant on the description of the excavators and publishers. Material from other sites was either partially or totally available for study, as is noted in the relevant catalogues.

[4] Goring 1988.

- Inventory number;
- Period;
- Phase;
- Number of units;
- Item category;
- Subtype;
- Material;
- Decoration;
- Shape;
- Section;
- Dimensions (height, length, width, thickness, weight, diameter, estimated diameter, inside diameter);
- Item condition;
- Examination status; and
- Degree of data collection.

I used a high resolution USB digital video microscope to analyse all of the items of jewellery within this catalogue (when the object was accessible). This instrument is capable of magnification reaching 320X, with real 2M pixels LENS and CMOS sensor, built-in LED illumination and image measurement software.[5] The maximum dimensions of each object are expressed in millimetres; these measurements were taken using dial callipers capable of measurements over 0.02 mm, and all weights were taken over 0.1 g.

The number of units studied from each geographic region varies substantially. The figure below gives the sum and percentage of artefacts from each geographic region:

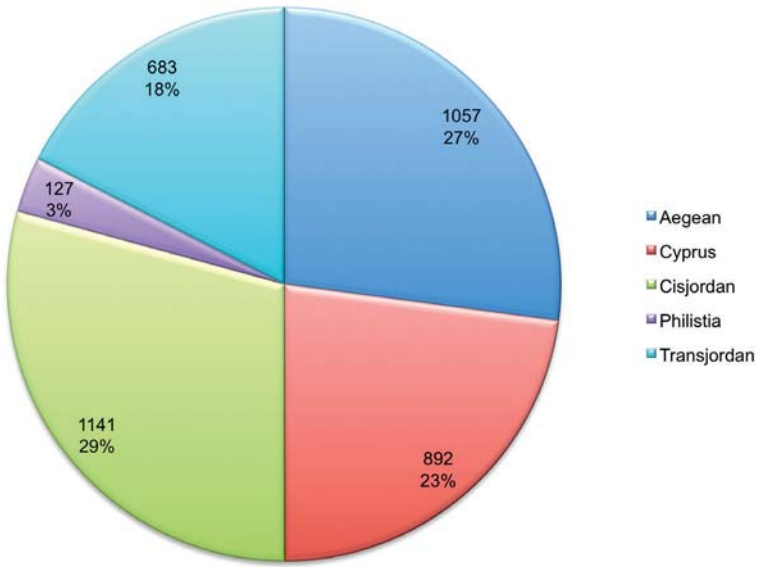

Fig. 4. Number of artefacts per geographic region

[5] For an explanation of the technical details for this product, refer to http://www.vitiny-usa.com/vitiny-um02.html.

4.2 MULTIREGIONAL TYPOLOGY

In what follows, I present a new typology of the metal jewellery identified from each of the 29 sites in the dataset — the first systematic comparison of jewellery for the Early Iron Age southern Levant and its western neighbours. This pan-regional metal jewellery typology classifies types and subtypes based on stylistic attributes. Each subtype is described according to its distinctive attributes, and its frequency across the 29 sites, and (when possible) I note parallels from other sites. This typology should prove a useful tool for enhancing our understanding of southern Levantine adornment practices in relation to the eastern Mediterranean as a whole.

The object categories are:

- Earrings;
- Rings;
- Bangles;
- Beads;
- Pendants;
- Garment fasteners; and
- Foil ornaments.

Each jewellery category is divided into types according to recognisably distinct variations in form or function. These groups are further subdivided by subtype, or *style*. A subtype in this case is a combination of attributes that might display a limited range of variability but (in general) is readily distinguished from other subtypes. These attributes represent the identifiable components of an object, defined as single variables of style:[6] use, shape, form, treatment, decoration, size, and so on. Beside the subheading is the total quantity of each subtype. If necessary, an additional subdivision is added for further variations. Each of these jewellery subtypes is then organised under the subheadings: (1) *description*; (2) *chronology*; (3) *material*; (4) *context*; and (when applicable) (5) *discussion*.

In some cases, jewellery categories have additional subdivisions according to different 'types' that have very distinct functions: Category 2 can be subdivided into rings worn on fingers and toes (Types 2I–2III), and spirals that are worn in the hair (Type 2IV); Category 6 can be subdivided into dress and toggle pins with a single shaft (Types 6I–6II), and fibulae in the form of a safety pin that have a more complex construction (Type 6III); and Category 7 can be subdivided into ornaments that decorate the forehead (Type 7I), decorate the mouth (Type 7II), or act as attachments to textiles (Type 7III) (**Table 2**). This method of dividing the data allows for a more focused analysis — particularly in Chapter 5.

[6] These variables are used in different types of statistical analyses that will be discussed in Chapter 5.

ITEM CATEGORY	TOTAL NO.
1 Earring	687
2 (Types 2I–2III) Ring	611
2 (Types 2IV) Hair spirals	50
3 Bangle	683
4 Pendant	74
5 Bead	1148
6 (Types 6I–6II) Pins	181
6 (Types 6III) Fibula	117
7 (Type 7I) Diadem	83
7 (Type 7II) Mouthpiece	56
7 (Type 7III) Plaque	210
TOTAL	3900

Table 2. Artefact categories and completeness of data

This metal typology draws on Beck's typology of beads; Keel's typology of engraved finger rings; McGovern's typology of pendants; Stronach, Blinkenberg, and Pedde's typologies of fibulae; Higgin's typology of relief beads; Henschel-Simon's typology of toggle pins; and Kilian-Dirlmeier and Vagnetti's typologies of dress pins. This metal typology also loosely draws on the typology of jewellery developed by Golani for the Iron Age II period.[7]

4.3 CATEGORY 1: EARRING TYPOLOGY

The identifying characteristic of the earring is the hoop, which threads through a hole in the earlobe and passes down, usually meeting the other end of the earring below or behind the lobe. In the database, an earring's *height* is its maximum height when suspended from the earlobe. This category is subdivided into the following subtypes: (1) *lunates*; (2) *lunates with attached pendant*; (3) *composite lunates or hoops with pendant*; (4) *annular hoops*; (5) *annular hoops with attached pendant*; (6) *slings*; and (7) *indefinable shapes and fragments*. Occasionally, it is possible to distinguish between earrings and nose rings when these items are found *in situ*,[8] but such finds occur so rarely that I have not attempted to separate earrings from nose rings in this database. The simplest method for making an earring was to cast a rod, which was then annealed and hammered to form the finished object;[9] alternatively, the earring could be made of a block-twisted or strip-twisted piece of sheet-metal. Additional attachments required techniques such as soldering, casting, moulding, filigree, and granulation.[10]

[7] Golani 2013.

[8] Megiddo Late Bronze Age Tomb 2121: Loud 1948, pl. 225:9. Biblical references to the placement of rings in the nose occur in Gen. 24:47 and Ezek. 16:12.

[9] See Appendix A for a glossary of the main metallurgical terms referred to.

[10] For discussion of various manufacturing and decoration techniques, refer to Ogden 1982.

4.3.1 Type 1I: Lunates

4.3.1.1 Subtype 1I.a: Small, plain with short hoop (36 units)

Description: Plain lunate shapes and small hoops are characterised by a solid body of crescentic shape and short hoop with its tapered ends meeting at one side behind the ear.

Chronology: This earring dates from the Middle Bronze Age onwards and is common in the Late Bronze Age and Iron Age.

Materials: Most often, this subtype is of copper alloy, but it is sometimes of silver or gold.

Context: Small lunates with short hoops mainly occur in burials throughout the southern Levant and only at Iron Age I–IIA Ekron and Iron Age I Beth Shean in settlement contexts. This earring does not occur in the Aegean and occurs only in very limited quantities at Late Cypriote II–III Enkomi, having probably derived from Near Eastern forms.[11]

4.3.1.2 Subtype 1I.b: Small, plain with elongated hoop (288 units)

Description: Plain lunate shapes with elongated hoops are characterised by a solid body of crescentic shape and an elongated hoop with its tapered ends meeting at one side. Sometimes the inner curve appears flattened as the result of the craftsperson curving the object over a mandrel (a metal rod).[12]

Chronology: This common subtype appears at the end of the Iron Age I and continues into the Persian period.

Materials: As with Subtype 1I.a, this earring is most frequently made of copper alloy (generally a copper and tin alloy with the occasional natural or intentional addition of lead or arsenic),[13] although sometimes it is made of silver or gold. Lunate earrings are most often made of solid hammered metal, although some examples of gold and silver have an inner core of a non-precious material, such as bitumen (nos. 637 and 1200) or copper alloy (nos. 1472–1473).

Context: Burials yielded the majority of this subtype, although exceptions come from Iron Age I Ashdod, Ekron, and Beth Shean. These earrings do not always occur as pairs, implying either that a single earring was worn in life, or that it was common practice to gift only one earring as a mortuary offering.[14] There is some suggestion that, like bangles and rings, lunate earrings served as portable wealth.[15] Like the lunate with a short hoop (Subtype 1I.a), this earring is found throughout the southern Levant, but not from the Aegean, and only rarely from Enkomi. Lunate earrings first appeared in Sumer in the mid-third millennium BCE

[11] Åström, L. 1972, pp. 563, 569.
[12] Ogden 1995, p. 70.
[13] Muhly and Muhly 1989, p. 284.
[14] See, e.g., single earrings at Sa'idiyeh: Green 2006, pp. 178, 179, 216.
[15] Lassen 2000, pp. 242–244; Thompson 2003, p. 73. See also Goring 1996.

and were introduced to the southern Levant during the Middle Bronze Age. This subtype also became popular in New Kingdom Egypt — possibly imported there by the Hyksos.[16] Nonetheless, earrings were far from common in Egypt before the end of the Late Bronze Age; Vernier records only two earrings dated earlier than the XVIIIth Dynasty.[17]

Discussion: The example from Ashdod (no. 2), described as being 'shaved' in its lower area, possibly had its weight reduced after polishing.[18]

Near Eastern scholars have compared the lunate earring to bovine horns;[19] in fact, the Hebrew *cagîl* (Num. 31:50) comes from the root related to the word 'calf', and it is most likely also related to the biblical term for a lunate earring.[20] An alternative linguistic interpretation connects the lunate to the crescent moon.[21] Olga Tufnell noted that earrings might have had cultic or amuletic significance, and quoted the biblical account of Jacob and his servants being turned from idolatry and handing over their earrings for burial (Genesis 35:4).[22]

4.3.1.3 Subtype 1I.c: Wide, plain with short hoop (27 units)

Description: This earring is a larger and heavier variation of Subtype 1I.b and is wider and rounder. Occasionally, the inner arc of the lower hoop has a small rise in the centre.

Chronology: Golani finds this subtype only in the Iron Age II,[23] but he may be referring only to those examples with the rise in the centre of the base. A few examples from this dataset date to Iron Age I–IIA.

Materials: This earring is made of all metals other than lead.

Context: Both settlement and burial contexts have yielded this subtype, mainly in Cisjordan and only at Azor (no. 9) in Philistia. Few of these earrings come from Transjordan; this earring is also uncommon in Cyprus, and none come from the Aegean. Two silver examples from Beth Shean (no. 132) were amongst a hoard of *Hacksilber.*[24]

4.3.1.4 Subtype 1I.d: Plain with oversized elongated hoop (16 units)

Description: This earring is a solid lunate with a very long wire hoop and a pronounced swell in the base.

[16] Ben-Shlomo 2006a, p. 195; Aldred 1971, p. 198.
[17] Vernier 1907. See also a scene from Amarna that shows Akhenaten bestowing earrings on his daughters: Borchardt 1923, pl. 1.
[18] Golani and Ben-Shlomo 2005, Table 4.3. Cf. examples from Tell Jemmeh: Petrie 1928, pls. 1–3; 22:40–42, 46–47; Wadi Fidan 40 cemetery: Levy *et al.* 2005, fig. 30–31; and Timnah: Rothenberg and Bachmann 1988, fig. 55:16, pl. 126:4.
[19] Platt 1972, p. 223. For further discussion of moon symbolism, see Golani 2013, pp. 157–159.
[20] Platt 1989, pp. 356–366.
[21] Limmer 2007, p. 288. See also Keel 1995; Keel and Uehlinger 1998; Maxwell-Hyslop 1971, pp. 64–82, 149–151.
[22] Tufnell *et al.* 1940, p. 63.
[23] Golani 2013, p. 96.
[24] Thompson 2009, p. 606.

Chronology: This subtype mainly dates to Late Cypriote III, and is uncommon in the Levant during the Late Bronze Age and Early Iron Age.

Materials: This earring is made only of gold, generally with an inner core of a cheaper material in the swollen base.

Context: This subtype occurs only in burial contexts and within this dataset comes from Enkomi and Kouklia. In the Levant, fine elongated lunates with only a slight swell in the base and made of copper alloy are recorded at Far'ah in Cisjordan (no. 317) and at Deir 'Ain 'Abata (no. 1146) in Transjordan.

4.3.1.5 Subtype 1I.e: Decorated lunate (3 units)

Description: This earring is a solid lunate that has decorative wire bands and/or spirals and granules.

Chronology: Within this dataset, examples date to the Iron Age I–IIA. Although uncommon, this subtype dates from the Late Bronze Age through to the Persian period. Several Late Bronze Age gold examples come from Jemmeh;[25] all of these have braided wire decoration. An additional earring in silver with wire coils from Deir el-Balah dates from the 13th century BCE.[26]

Materials: This earring is made of silver or gold.

Context: Although it appears in limited quantities, this subtype comes from both settlement and burial contexts. In this dataset, one gold example with wire coiled around the base comes from Megiddo (no. 772),[27] and two matching gold earrings come from Tawilan (nos. 1463–1464; **Fig. 41:I.e**); one earring from Tawilan had three granular beads threaded onto the hoop.[28] These earrings from Tawilan also have filigree S-scrolls[29] and a mulberry cluster of four gold grains attached to each base with wire binding to each side of the cluster. Parallels for decorative lunate earrings include a silver pair from Late Iron Age Eshtemoa;[30] one in gold from Aşşur that dates to the Neo-Assyrian period;[31] another from Ephesos that dates from the eighth century;[32] and a small, decorated silver hoop from Ekron that comes from Stratum 1b.[33]

[25] Petrie 1928, pl. 1:7–9 and 1:12–13.
[26] Dothan 1979, figs. 50 and 58.
[27] Loud 1948, pl. 225:18.
[28] Maxwell-Hyslop 1984; Ogden 1995, nos. 5–6, fig. 8:17. See also Subtype 1II.b. Cf. earring from Beth Shean (no. 160) that had a faience bead threaded onto the hoop.
[29] Lemaigre 1983.
[30] Yeivin 1990, figs. 16:12–13 and 20.
[31] Golani 1996, p. 27; Maxwell-Hyslop 1971, figs. 129–130.
[32] Golani 1996; Marshall 1911, p. 72, pl. 9:943–944 and 9:1065; Maxwell-Hyslop 1971, p. 27.
[33] Golani 1996, Object 2077, fig. 6:4.

4.3.1.6 Subtype 1I.f: Plain hollow lunate (2 units)

Description: Generally, this earring is constructed from sheet-metal, and has two moulded halves joined together to form a crescent that attaches to a wire hoop. Alternatively, it is possible to construct this earring using a single piece of club-shaped sheet-metal folded inwards on itself with the narrow end hammered into the hoop. This lunate subdivision is due to its distinctive manufacture, which differentiates it from similar solid metal or foil-over-core lunate varieties.

Chronology: This subtype dates from the Late Bronze Age through to Iron Age I, with increased popularity from the Iron Age II to Persian periods.[34]

Materials: This earring is made of silver, gold, or copper alloy.

Context: Within this dataset, only Far'ah (no. 711; **Fig. 41:I.f**)[35] and Enkomi (no. 1947)[36] yielded these earrings. The scarcity of this subtype may reflect its inadvertent classification under the general subtype of 'lunate'.

4.3.2 Type 1II: Lunates with Attached Pendant

4.3.2.1 Subtype 1II.a: Lunate with solid knob attachment (9 units)

Description: This lunate earring has a simple knob pendant joined to the base with solder; the literature also describes the knob as hemispherical, globular, or lenticular. It is possible to cast this subtype in a mould; this technique eliminated the artisanship required of soldering and granulation, thus increasing the earring's accessibility.[37] A version of this earring collared with granules between the knob and hoop appears by the Iron Age II.[38]

Chronology: This subtype has a widespread distribution that spans the mid-second millennium BCE into the Persian period, although it is less common in Iron Age II levels. The scarcity of this earring in Iron Age II implies that one from Tawilan (no. 1471; **Fig. 41:II.a**) might be an heirloom and manufactured earlier than the rest of the hoard; another found in Ekron Stratum 1b was possibly also an heirloom.[39] The earring with a granular collar is also a regular feature of Late Cypriote IA Cypriote tombs.[40]

Materials: Most commonly, these earrings are of precious metals such as gold or silver, but are also of copper alloys.[41]

[34] On the use of sheet-metal in the manufacture of earrings, refer to Golani 2013, p. 123. For discussion of this subtype being present into the classical periods, see Rosenthal-Higgenbottom 2002.
[35] Petrie 1930, pl. 38:225.
[36] Marshall 1911, p. 325; Crewe *et al.* 2009, no. 24.27; Goring 1983, no. 298.
[37] Maxwell-Hyslop 1971, p. 136.
[38] Ekron no. 2084.04: Golani 2013, p. 106.
[39] Golani 1996, pp. 30–31, fig. 6:7.
[40] Found in silver at Enkomi within Tomb 93: Åström, L. 1972, p. 25.
[41] Tufnell 1953, pl. 54:1–5.

Context: Subtype 1II.a occurs in tombs and hoards across Cisjordan and Transjordan; in this dataset, they come from Beth Shean, Far'ah, Nasbeh, and Tawilan. Late Bronze Age examples were recovered from Lachish,[42] 'Ajjul,[43] Qasile,[44] and Gezer;[45] additional Iron Age I–IIA examples were recovered from Tomb 106 Lachish, the Akzhiv cemetery,[46] Eshtemoa,[47] Ein Hofez,[48] Wadi el-Makkuk,[49] and a jewellers' hoard from Jemmeh,[50] while late Iron Age II examples were recovered from Beth Shemesh Tomb 5 and 8,[51] and from Megiddo Stratum III.[52]

Discussion: The presence of small versions of this subtype, such as those from Beth Shean (no. 151) and Nasbeh (no. 981), might indicate the intentional scaling of these earrings to children's sizes. This subtype is comparable to Mesopotamian earrings:[53] for example, those in the reliefs of Ashurnasirpal II (*ca.* 884–859 BCE);[54] Neo-Babylonian examples from Uruk;[55] examples from a hoard of jewellery from Ur; and decorative examples from Kamid el-Loz.[56]

4.3.2.2 Subtype 1II.b: Lunate with 'mulberry' attachment (5 units)

Description: These lunate earrings have a granulated cluster of drops joined to the base with solder. While termed 'mulberry' earrings, these earrings are also identified with the grape.[57] Some scholars see the technique of granulation (termed *colloidal hard soldering*)[58] as a link between the Late Bronze Age and Iron Age, and evidence of a connection between the Levant and the Aegean.[59] Granulation is a complex technique requiring several manufacturing stages, numerous components, a very high level of skill, and above all, temperature control in order to produce a good quality piece. However, it is also possible to create this subtype by casting the metal in a stone mould.

Chronology: In the Levant, this subtype dates from the end of the Middle Bronze Age onwards. Late Bronze Age Subtype 1V.b examples (discussed below in Section 4.3.5.2)

[42] Tufnell 1958b, pl. 25:63.
[43] Petrie 1932, pl. 18:243; 1934, pls. 17; 18:84–85, 92, 101, 107–108, 114–119; 34:532, 534.
[44] Mazar 1985a, p. 5.
[45] Dever 1974, p. 101, pl. 136:1.
[46] Mazar 2004, fig. 24:19.
[47] Yeivin 1990, fig. 16:3–7 and 16:19–20.
[48] Unpublished: see Golani 2013, p. 107.
[49] Sass 2002.
[50] Petrie 1928, p. 10, pl. 1:4.
[51] Grant 1932, pls. 43:24–25 and 59:11–15.
[52] Lamon and Shipton 1939, pl. 86:21.
[53] Maxwell-Hyslop 1971, p. 226.
[54] Maxwell-Hyslop 1971, pl. 201; Petrie 1930, pls. 37 and 42:310.
[55] van Ess and Pedde 1992, pl. 77, no. 919. For Far'ah, see Petrie 1932, pl. 49:952.
[56] Bennett 1984, p. 22. For examples from Tomb 15 and 69, refer to Poppa 1978, pls. 12 and 20 respectively.
[57] Platt 1974, p. 4.
[58] Aldred 1971, pp. 70–71.
[59] Barnett 1951; Colburn 2008, p. 208, fn. 51. Crowley (1998, p. 179) notes Artzy's observations (1991, pp. 121–147) in relation to finds from Nami.

generally have a rounded hoop with a top opening.[60] By the Iron Age I, earrings occur with either top or side openings, and by the Iron Age II they have mainly side openings. This earring appears frequently in Late Minoan Crete, while in the earlier part of the Late Cypriote period it constitutes one of three main earring forms found in Cyprus.[61]

Materials: This earring is of gold in Late Bronze Age contexts and of either gold or silver in Iron Age I contexts. Archaeologists recovered a unique bronze example from Kaloriziki in Cyprus.[62]

Context: This mulberry earring predominantly occurs in tombs; in this dataset, it occurs in silver at Beth Shean (no. 165), in silver and gold at Far'ah (nos. 469 and 566; **Fig. 41:II.b**), and in gold at Enkomi (no. 2016). In Cisjordan, mulberry earrings also come from Lachish,[63] Jawa,[64] Megiddo,[65] and Gezer.[66] This earring may have originated in the Near East:[67] Middle Bronze Age examples of similar granulated jewellery were found at Byblos,[68] and Late Bronze Age examples were found at Alalakh, Ras Shamra, Atchana, and Mari.[69] When earrings with mulberry pendants occur in Late Cypriote Cyprus (for example, at Alaas),[70] they are thought to be of Levantine origin.[71] Mulberry earrings and moulds were found together at Late Bronze Age Lachish,[72] other moulds were found in Late Bronze Age levels at Alalakh and at Ras Shamra,[73] and another was associated with the late Iron Age I settlement at Jemmeh.[74] A mould variation with a long granulated appendage was found in an Iron Age II context at Fakhariyah, Syria.[75]

Discussion: Some authors associate this earring with the spread of Asiatic traditions in goldworking and the movements of northern populations during the Hyksos period.[76] Earrings with wire twisted at either side of their mulberry pendants also occur in Cyprus, such as those from Kouklia, where they often have a disc between the granules and the hoop.[77]

[60] E.g., many of those earrings from 'Ajjul: Petrie 1931, pls. 16:70–71, 75–76; 18:82, 102–103, 125–126; 20:142–143, 148; 21:201; Also the Governor's tomb: Petrie 1933, pl. 14:2–4, 27.
[61] Gjerstad *et al.* 1934, pls. 78.3:53, 3.155, 80.2:12, 2.46, 2.48.
[62] Benson 1973, pl. 41:K1021.
[63] Tufnell 1958b, pl. 25:15.
[64] Daviau 2002, fig. 2:21.
[65] Tomb 251: Guy 1938, pl. 115:10.
[66] Gold earring reg. nos. 2295, 2296, and 2297, and also a fourth similar gold earring (no. 1581) found in 1972 in the same area on Surface Locus 5013: refer to Seger 1976, p. 133, fig. 2d.
[67] E.g., Alalakh: Woolley 1955, pl. 69:i. For further discussion of this subtype, refer to Maxwell-Hyslop 1971, p. 116.
[68] Culican 1958, pp. 90–103, pl. 9; Dunand 1956, pl. 132; Tufnell and Ward 1966, pp. 165–241.
[69] Tomb 236 Mari: Parrot 1937, pp. 54–84, pl. 15; Ras Shamra: Schaeffer 1939, fig. 31. See also Maxwell-Hyslop 1971, pp. 116, 136, 138, 178, pl. 131.
[70] Karageorghis 1975, pl. 39:P3.
[71] Åström, L. 1972, p. 571.
[72] Cave 4004: Tufnell 1958b, pl. 25.15; Maxwell-Hyslop 1971, p. 138, pl. 101, Louvre nos. M1424, A019028, H1266.
[73] Maxwell-Hyslop 1971, pp. 136, 138.
[74] AFF 193, Jemmeh: Petrie 1928, pls. 20:45 and 42:3.
[75] Vermeule 1967, fig. 3:a–b.
[76] Maxwell-Hyslop 1971, pp. 109–111.
[77] Karageorghis 1983, p. 420, T. 67:50, fig. 2, T. 87:10, T 43:82, and T. 79:94. Cf. examples from Lapithos: Tombs 417, 420, and 422 at Lapithos: Gjerstad *et al.* 1934, pls. 51:2.16, 51:2.10, 53:2.21, and 54:4.2.

These Cypriote earrings with granule pendants and twisted wire decorations have interesting parallels with Subtype 1I.e from Tawilan.[78] Therefore, while granule and wire decoration is known from the Near East and from the later Neo-Assyrian period, this type of decoration could also demonstrate a Cypriote influence.

4.3.2.3 Subtype 1II.c: Lunate with drop attachment (7 units)

Description: This earring has an elongated droplet joined to the base with solder. This subtype bears some similarity to Subtype 1II.a, but the droplet occurs in various shapes and the hoop attaches to it in various ways.

Chronology: This earring is common in Late Bronze Age contexts (for example, at 'Ajjul),[79] but is rare in the Iron Age.

Materials: Generally, this earring is made of copper alloys, although one example is of silver.

Context: This subtype only occurs in burial contexts; in this dataset, it comes from Far'ah (nos. 644, 650, 708) and from Nasbeh (nos. 872–873, 964, 967; **Fig. 41:II.c**), both in Cisjordan. Of these, nos. 644, 708, and 873 have an additional attachment below the drop that gives them the appearance of an abstracted pomegranate.[80]

4.3.2.4 Subtype 1II.d: Lunate with bud attachment (15 units)

Description: A unique form of the so-called 'tassel' earring is possibly a derivative of Late Bronze Age flowerbud earrings (Subtype 1III.a).[81] The attachment is an elongated drop joined to the base of the hoop (generally with a side opening) with solder. The pendant has a horizontal line incised approximately a third down from the top, and incised vertical lines that extend to the base of the bud. [82]

Chronology: Examples with rounded bud-like attachments (with or without incisions) date to the Late Bronze Age–Early Iron Age transition throughout the southern Levant, although they generally date to Iron Age I.

Materials: These earrings are made of either gold or copper alloy.

Context: All known examples derive from burial contexts. When Maxwell-Hyslop published *Western Asiatic Jewellery*,[83] no evidence for the tassel earring existed outside the Gaza region. Variations of this earring have since been unearthed across Cisjordan and

[78] Karageorghis 1983, p. 420, pl. 101.
[79] Petrie 1932, pl. 14:17.
[80] Cf. Lachish Tomb 1002: Tufnell 1953, pp. 235–236, 391.
[81] Maxwell-Hyslop (1971) noted that a detailed typological study of this subtype along with distribution maps would be welcome.
[82] All varieties of tassel earrings are equivalent to Golani Type II.9. For further discussion on the development of the tassel earring, see Chapter 6. See bell pendant Subtype 4V.a that may in fact be a form of bud-like pendant.
[83] Maxwell-Hyslop 1971.

Transjordan.[84] In this dataset, examples come from grave 605 and cemetery 800 at Far'ah in Cisjordan.[85] In Transjordan, examples were recovered from the Baq'ah Valley, Deir 'Ain 'Abata, Madaba, and Sahab. Bronze examples have also been found at the Egyptian mining temple at Timnah,[86] and within Grave 371 — a child's burial — in the Wadi Fidan 40 cemetery in the Faynan district of southwest Jordan, one of the most significant sources of copper ore in the region.[87]

4.3.2.5 Subtype 1II.e: Lunate with plain flared tassel attachment (7 units)

Description: A simplified version of earring II.d has a plain, flared attachment joined to the base with solder.

Chronology: This earring appears only within Iron Age I–IIA contexts.

Materials: All examples are made of copper alloy.

Context: This subtype comes from burial contexts at Nasbeh and Far'ah in Cisjordan, and from the Baq'ah Valley in Transjordan. Flared examples like those from the Baq'ah Valley were also recovered from Tomb 1 at the Wadi Fidan 4 site and from Grave 371 at the Wadi Fidan 40 cemetery.[88]

Discussion: Although found in limited quantities, this distinctive earring is prevalent east and west of the Jordan Valley. The tassel earring from Far'ah parallels that from Cave A4 in the Baq'ah Valley, and another from Area 800 is similar to earrings from Sahab — also in Transjordan. Incidentally, both Cave A4 and Sahab, like Far'ah, have rich jewellery assemblages that include iron jewellery — strengthening the evidence for connections between the southern coastal plain and Transjordan during the Early Iron Age. While this earring shares some heritage with a silver earring that has a flared drop pendant from Amarna in Egypt,[89] it is clearly different.

4.3.2.6 Subtype 1II.f: Lunate with tassel attachment (6 units)

Description: The bud attachment transforms into a tassel during the Early Iron Age. This earring occasionally has a coiled cone of wire connecting the granulated pendant to the lunate body of the earring.[90]

[84] E.g., amongst a 10th century hoard of *Hacksilber,* and whole and broken silver jewellery at Arad, was an earring fragment bearing similarities to tassel earrings: refer to Aharoni 1980. Herzog (2002) revised this date to the ninth to eighth centuries BCE, although in accordance with Christine Thompson, the hoard retains its earlier date here: Thompson 2003, Table 2; 2007, p. 242.

[85] Petrie 1930, fig. 37. Ogden (1995, p. 70) notes that Tomb 514 referred to in the original publication is no doubt a misprint for 518.

[86] Rothenberg and Bachmann 1988, p. 149, no. 38:181–183, fig. 55:15.

[87] Beherec *et al.* 2014, fig. 9:31.

[88] Levy *et al.* 2005, pp. 453, 468, fig. 31; Beherec *et al.* 2014, figs. 9:5 and 30.

[89] This earring comes from the so-called 'Crock of Gold' hoard dated from the XVIIIth Dynasty: see Frankfort and Pendlebury 1933, pp. 59–60, pl. 43.4. Cf. comments by Ogden (1995, p. 71).

[90] Maxwell-Hyslop 1971, pls. 198a, 198c, and 200.

Chronology: Maxwell-Hyslop originally dated the tassel earrings from Tawilan to the 11th–10th centuries BCE and then to the 10th–ninth centuries;[91] this latter date was also preferred by Ogden, who felt that comparisons to the tassel earrings at Far'ah justified this date.[92] Nevertheless, based on the dating of the earrings from Far'ah and a late date within the Late Bronze Age–Iron Age I for the earrings at Madaba and Timnah, it appears that the tassel earring was an innovation of the Iron Age I that continued into Iron Age II.[93] A gold tassel earring found in 10th century BCE levels at Ashkelon strengthens this hypothesis.[94]

Materials: This subtype is made only of gold.

Context: Several earrings from Far'ah reflect the transition from flowerbud to tassel. One of these from Tomb 241 (no. 712) has a cylinder formed from flat sheet gold with vertical strips of notched wire alternating with punched lines of dots to augment the ribbed effect, while nos. 357 and 358 are a form of tassel composed of gold strips interspersed with fine zigzagging strips that creates the illusion of rows of granules.[95] The shift from bud to tassel is particularly evident in another earring from Far'ah in Tomb 222 (no. 675), which has what appear to be sepals (the small green leaves that cover and protect the outside of a flowerbud) covering rows of granules, with each granule fixed into longitudinal depressions in the curved sheet that forms the body of the pendant. Some of these tassel pendants from Far'ah curve inwards at their base due to wear, indicating their use in daily life.

These earrings from Far'ah are similar to ornate granulated earrings from Tawilan in Transjordan and from Ashkelon in Philistia. Two matching earrings from Tawilan (nos. 1459 and 1461) include a pendant formed of corrugated sheet gold,[96] which has granules that fill the vertical gullies of the pendant. This pendant then attaches to a plate, which in turn suspends from a coiled cone of strip-twisted gold wire; the pendant and a lunate hoop are joined together with solder. A third, similar earring (no. 1460; **Fig. 41:II.f**) has an additional ring of granules that conceals the solder join at the cone's base, and depressions punched from behind along the corrugations act as ridges between the granules.[97] On the most elaborate of the Tawilan pieces (no. 1462), the granules are fixed to each other and the rows of granules hang directly from the wire cone between thin reinforcing rods of gold.[98] Rings of granules also cover the lower section of the lunate hoop and the plate between the tassel and cone, while the cone is also decorated with triangular patterns of minute granules.[99]

[91] Maxwell-Hyslop 1971, p. 225. Cf. Maxwell-Hyslop 1984, p. 22.
[92] Ogden 1995, p. 75
[93] Sass 2007, p. 259.
[94] Sass 2007. Cf. King and Stager 2001, Ill. 155.
[95] Another tassel earring, apparently found in Tomb 368, was associated with a scarab of Ramses XI (1113–1085 BCE): Maxwell-Hyslop 1971, pl. 198c.
[96] Ogden 1995, nos. 1 and 2, fig. 8.6.
[97] Ogden 1995, no. 3, fig. 8:11–12.
[98] Ogden 1995, no. 4, fig. 13–15.
[99] Bennett (1984) considered this a unique piece, possibly representing the work of a goldsmith familiar with earlier prototypes.

Excavators discovered another large tassel earring within a pit at Ashkelon, dated according to diagnostic pottery to the late 10th to ninth centuries BCE.[100] This earring also has a coiled cone attached to a lunate hoop to which is attached a plain cylinder with a top plate. Surrounding the perimeter of the plate at the join to the cone is a line of granules. Granules also run in double vertical lines around the cylinder.[101]

The technique of creating rows of granules without a backing is most closely paralleled by the technique used to create a square gold and electrum tassel earring from the Judean desert at Wadi el-Makkuk, considered to be the 'prize find' amongst a Iron Age I hoard.[102] The pendant is comprised of rows of granules that adjoin to an upper square plate that attaches to a lunate hoop via a cylindrical stem. This square tassel earring is strikingly similar to one from Athens, whose date is unclear but is likely to be the 10th to ninth centuries BCE.[103]

Discussion: Jewellery of this period is often assumed to show Egyptian inspiration, but contemporary Egyptian jewellery is almost devoid of granulation (although it becomes more prevalent during the late New Kingdom).[104] The granulation process enabled craftsmen to attach tiny metal particles to the surface of the jewellery with a minimum amount of solder, so that they either appear to rest on the surface without support or are raised on low pedestals; in either case, they cast a sharp shadow and stand out in high relief. The skill required for this technique suggests that granulation was a prestige technology adopted by elites.[105] While there is little evidence for the technique of creating rows of granulation without a backing as seen in the Tawilan earring, this technique was also used for constructing the granular cylinder beads from Tawilan and Ekron and is conspicuous from Mycenaean contexts that date from the mid-second millennium BCE.[106] The triangular granulated decoration seen on the Tawilan earrings is a feature familiar from Mesopotamian cylinder seal caps of the 18th century BCE.[107]

Other than one earring from Tomb 222 at Far'ah, the wire cone is a feature of all the tassel earrings from Ashkelon, Far'ah, and Tawilan. The use of a coiled spiral of gold wire to connect the pendant to the hoop, while sharing similarities with biconical wire beads from Egypt from the sixth century,[108] might have its closest parallels in the Aegean and Italy. Wire cone pendant earrings dated to the 10th to ninth centuries BCE come from Lefkandi Subprotogeometric II Tomb 38,[109] and the wire cone also bears some similarity to coiled wire

[100] The artefact was broken in two, with hoop and pendant allocated the basket (registration) nos. 46604 and 46605. Associated finds included an Aegean *oinochoē* (pitcher): Stager *et al.* 2008, p. 275.

[101] King and Stager 2001, Ill. 155; Stager *et al.* 2008a, fig. 15.47.

[102] Found within a metal hoard, including silver pieces, earrings, toggle pins, and beads: see Sass 2002, p. 23. An interesting parallel is a silver granulated earring from Luristan dated to the eighth–seventh centuries BCE: Maxwell-Hyslop 1971, p. 264, fig. 249.

[103] Lemerle 1938, p. 448, pl. 48:5, fig. 16.

[104] Ogden 1995, p. 70.

[105] Cf. Politis 2001.

[106] Politis 2001, p. 72. Pendants in Uruk that date to the Neo-Babylonian period are made from granules without a backing: see van Ess and Pedde 1992, pl. 77, no. 924.

[107] Lilyquist 1993, p. 34.

[108] Engelbach 1924, pp. 178–185, pl. 4.

[109] Catling 1964, p. 15, fig. 26; Ogden 1995, p. 69. In addition, Tomb 43 contained one coiled wire bead: refer to Popham *et al.* 1982, p. 246.

pendants attributed to the Nuragic civilisation of Sardinia.[110] Parallels can be drawn with other earrings using this component, [111] such as a pair of granulated silver earrings from Kamid el-Loz Tomb 76, although these date to a later period.[112]

4.3.3 Type 1III: Composite Lunates or Hoops with Pendant

4.3.3.1 Subtype 1III.a: Hoop with trilobate flowerbud pendant (7 units)

Description: Flowerbud earrings with the appearance of a calyx consist of several elements of sheet-metal. The most distinctive feature of the earring is the three bottom lobes that are beaten gold foil over a core. These lobes have a circular gold cap soldered to their base and a flared cap that confines the upper portion of the lobes. The cap wrapping ends in a round bead on the top of the pendant to which a small gold ring is fused.[113] This pendant then hangs on a hoop, which in some cases is a thin hoop of gold wire with tapered overlapping terminals, or in the case of the examples from Nami, is a hoop made of four strips of coiled gold wire fused together in order to imitate braiding.

Chronology: Subtype 1III.a predates the tassel/bud earring, with most examples dated from the 13th century BCE.

Materials: This earring is made only of gold.

Context: Excavators recovered four examples from Tomb 118 at Deir el-Balah.[114] These examples bear a close resemblance to others (nos. 200–202) from Beth Shemesh (although these pendants are missing their suspension hoops)[115] and from Far'ah (nos. 256–257, 259).[116] This subtype was also found within a burial at Nami; the excavators of these objects describe them as pomegranate buds earrings.[117] All of these earrings are strikingly similar to another earring from Hala Sultan Tekke that dates to Late Cypriote IIIA (no. 2175i; **Fig. 41:III.a**).[118]

[110] Lo Schiavo 1994, p. 77, fig. 5. Lo Schiavo compares these ninth century BCE bell-shaped pendants — *buttons decorated with conical elongated appendage* — to coiled ceramic ware. Some varieties of these conical buttons have zoomorphic attachments that Lo Schiavo compares to the protome on the banded headwear worn by the bronze figurine of the *Archer of Orantes* from Usellus. For further discussion and references, refer to Verduci 2013.

[111] Specifically, sixth century BCE Egypt and fifth century Ukraine: Ogden 1995, p. 72.

[112] Poppa 1978, p. 21, pl. 21. Further examples of this hollow drop pendant earring — occasionally seen with coiled wire in its upper section — date to the eighth to fifth centuries BCE: see Golani 2013, pp. 103–104.

[113] Dothan, T. 1979, pp. 73–77, fig. 164.

[114] Dothan, T. 1979, Ills. 158, 164, 171–173.

[115] Stratum IVB, Tadmor and Misch-Brandl 1980, p. 77, fig. 3; Grant 1932, p. 21, pls. 18: top and 49:22.

[116] Dothan, T. 1979, pp. 74, 76. This earring comes from plundered Tomb 934 at Far'ah dated to the XIXth–XXth Dynasties: Petrie 1932, p. 24, pl. 51.

[117] Artzy 1991.

[118] Paul Åström was aware of the Deir el-Balah, Far'ah, and Beth Shemesh examples: Åström 1983, p. 8, figs. 1 and 12, no. 1157.l. In this instance the trilobes are separated by a central wire to which a rivet is attached to the base. Åström hypothesised this was the dowry of a non-Cypriote woman, possibly from Egypt or Palestine: see p. 10.

Two very similar pendants without earring hoops (or upper caps) were amongst a hoard from Ras Shamra in Ugarit. These earrings were within a context dated to immediately before the arrival of the *Sea Peoples* at the beginning of the 12th century BCE.[119] A very similar capped example was within the so-called 'Tel Basta Treasure'; although scholars have assigned this earring to various dates between the XIXth–XXVIth Dynasties, the favoured date is between the 13th and 12th centuries BCE (despite some intrusive elements).[120] Should the earring be assigned a date in the 12th century, it would make this example much younger than the other Levantine earrings of this subtype; having said that, some items within the hoard are possibly heirlooms, meaning that this earring could also be an heirloom.[121]

Discussion: These earrings appear linked to local traditions, and given their similarity it may be that the same workshop produced many of them. Objects from the Basta treasure display some foreign characteristics, none more so than the flowerbud pendant earring, and while there might be an Egyptian precedent in the form of a cornflower,[122] that late XVIIIth Dynasty earring is clearly different from this subtype.[123]

Ivory pomegranates dated to the Late Bronze II–Iron Age II come from Ekron[124] and from Ashkelon.[125] Further examples come from Lachish,[126] Akhziv,[127] Ugarit,[128] and Cyprus.[129] Realistic pomegranate pendants in precious metals occur during the Late Bronze Age to Early Iron Age in the southern Levant, during the Mycenaean period in the Aegean, and during the Late Cypriote III in Cyprus,[130] indicating a regional familiarity with the motif.[131] Dothan and Ben-Shlomo have researched the cultic significance of these pomegranates in Canaan, and their appearance at Philistine sites towards the end of the Iron Age I period.[132] Their findings suggest that the pomegranate has a strong connection to Philistine cult. In Assyrian art, the bud is also a motif often depicted with the pomegranate.[133]

[119] Schaeffer 1939, pp. 144–145, fig. 6. Ras Shamra of this period displays strong Aegean and Cypriote features: Schaeffer 1939, pp. 42–43. Recent publications discuss, e.g., Cypro-Minoan signs on tablets from Ras Shamra: Davis 2011, pp. 45–46; and pottery: Artzy *et al.* 1981; Barako 2000, p. 522.

[120] Lilyquist 2012, p. 20; Ogden 1990–1991.

[121] The use of enamel to decorate vessels and perhaps one pectoral also occurs on gold rings dated to the 12th century in Cyprus. Inscriptions on the vessels dated to *ca.* 1000 BCE may have been later additions: Ogden 1990–1991, p. 11.

[122] Ogden 1990–1991, p. 13. Two silver pitchers with gold animal handles within the hoard were thought to be of Egyptian origin, but several scholars now question whether they are not in fact Levantine in character: see Lilyquist (2012) for discussion and references.

[123] Andrews 1990, p. 126, fig. 54. The cornflower is quite distinct from the lotus pendant also popular in ancient Egypt: see fig. 55, pls. 5 and 8. Similar pendants from Egypt date to the 12th century BCE: pl. 59:B.

[124] Ben-Shlomo and T. Dothan 2006, p. 24, fig. 15:4.

[125] Stager 2004.

[126] Tufnell *et al.* 1940, pl. 20:25–26.

[127] Mazar 2001, fig. 25:5.

[128] Gachet 1987, pl. 1:8.

[129] Kourou 1994, pp. 206–207, fig. 1:5. E.g., locally-manufactured pomegranate heads come from Tomb 3, Enkomi: Gjerstad *et al.* 1934, pl. 78: E. 240–241; and Tomb 9, Kition: Karageorghis 1974, p. 91, no. 4.c, pl. 87:132.

[130] Gjerstad *et al.* 1934, pls. 3; 67:4, 27; Pierides 1971, p. 18, pl. 8:4.

[131] For a catalogue of examples, see Golani 2013, p. 157.

[132] Dothan, T. and Ben-Shlomo 2007. See also Artzy (1991) and Ward (2003) in relation to the Late Bronze Age.

[133] Reade 1963, p. 42; The Israel Museum, Jerusalem: No. IMJ 71.79.184.

4.3.3.2 Subtype 1III.b: Hoop with basket pendant (1 unit)

Description: This composite earring consists of a solid or hollow box or basket-like pendant with two wire handles attached cross-wise to its upper corners. These handles attach to a suspension ring, which in turn attaches to second ring by which the pendant hangs on a wire hoop. Some baskets also contain a small pyramid of granules.[134]

Chronology: This subtype is prevalent in seventh to fifth century BCE contexts. Only two fragments in Cisjordan date somewhere between the 10th and seventh centuries BCE, but given the date of most of the other examples, I suggest a late date within that period (possibly Iron Age IIB, corresponding to the eighth century BCE).

Materials: This dataset includes one example of silver.

Context: Basket earrings that possibly fall within the Early Iron Age come from Far'ah (no. 608; **Fig. 41:III.b**)[135] and from the Akhziv Cemetery.[136]

Discussion: The basket motif is associated with the Phoenician presence outside of the Levant, at Mediterranean locations such as Cyprus, Greece, Carthage, Algeria, Morocco, Italy, and Spain.[137] Similar open boxes made of stone occur at Beth Shean, Lachish, Ekron, and Madaba.[138] The basket might represent a full-sized object whose significance is unclear, although the basket possibly represented some type of portable shrine.[139]

4.3.3.3 Subtype 1III.c: Hoop with realistic bucranium pendant (12 units)

Description: Bucrania pendants are earring pendants in the form of a bull's head formed of two embossed halves soldered together. Generally, this pendant also has collared perforations located above the ears from which it suspends on a wire hoop. A craftsperson would use a fine tool to chase the realistic details of the head, which often include hair, eyes, snout, and sometimes a rosette on the forehead.

Chronology: Bucrania are most likely a local Cypriote invention and occur throughout the Late Cypriote period and into the Early Iron Age.

Material: This subtype is made of gold.

Context: In this dataset, this earring comes from Enkomi (nos. 1939–1942, 2024–2028, and 2119) and from Kouklia (nos. 2254–2255: **Fig. 41:III.c**). Apparently, a badly crushed example also comes from Tomb 76 at Kouklia.[140] Discoveries of less-developed Aegean

[134] Possible precursors to the basket pendant are the hollow lidless boxes or cubes (often in fragments), although only one retains a suspension loop. Examples from Lachish, Far'ah, Beth Shean and Ekron all date to the Iron Age I–IIA period, but given the inability to assess their use as earring pendants these examples have not been included here: refer to Golani 2013, pp. 120–121.

[135] Petrie 1930, pl. 41:275.

[136] Dayagi-Mendeles and Ben-Dor 2002, p. 43.

[137] Golani 2013, pp. 117–120.

[138] Golani 2013, p. 120.

[139] For full discussion of this subtype, its geographic distribution, its usefulness as an ethnic and chronological marker and additional references, see Golani 2000 and 2013.

[140] Karageorghis 1983, p. 215.

examples come from Tiryns[141] and from Perati, both in Attica.[142] Other examples come from Orthi Petra[143] and from Zafer Papoura[144] on Crete. In the Levant, one slightly crushed bucranium pendant was discovered in Early Iron Age levels at Dor;[145] this object is just one of many that links Dor on the Cisjordan coast with Cyprus.[146] No other pendants of this variety are found elsewhere in the southern Levant.[147]

Discussion: The features on Aegean examples (such as the rosette chased on the bull's foreheads) also appear on Cypriote examples, and this may indicate the trade relations that existed between the Aegean, Crete, and Cyprus during the Late Minoan–Late Helladic IIIC.[148] Other scholars suggest that the less-naturalistic rendering on these Aegean earrings and their close similarity to each other points to a local manufacture on the Greek mainland within specialised workshops during the Late Helladic IIIC.[149] Unlike the Cypriote examples, however, the Aegean examples apparently only have one impressed side, while the other side is plain.[150] The bucrania motif is often associated iconographically with double axes and figure-of-eight shields in the Aegean, in what is claimed to be the symbolic representation of animal sacrifice.[151]

Paule suggests the bucrania and other bull imagery at sites in Cyprus may relate to ritual beliefs that were associated with the *Horned God*,[152] but she also likens the rosette motif to the sun disc between the horns of the Egyptian goddess Hathor;[153] this same motif is also impressed on Cypriote foil ornaments.[154] Cypriote bucrania are comparable to earlier XIIth Dynasty examples from Dashur and Byblos,[155] and this suggests that the earring may have spread from these areas to Cyprus and then from Cyprus to the Aegean, perhaps with movement of itinerant artisans.[156]

[141] Karo 1930, pp. 124–125, fig. 1. Buchholz noted that there was photographic documentation of another example preserved in the archives of the German Archaeological Institute of Athens: Buchholz 1986, p. 143. Aegean parallels, such as those from Tiryns, are cruder and less developed than are those from Cypriote contexts: see Paule 2011, pp. 158, 160.

[142] Perati Tomb 11 (excavation no. M39), Tomb S19 dates from 1165/1160–1000 (no. M91), and Tomb 152 (no. M221): Iakovides 1969–1970, Vol. A, p. 183; Vol. B, pp. 297–299, 410, and 415.

[143] Kanta 2005.

[144] HAM X-544.

[145] Ben Basat 2011, pl. 8:13–19. This is comparable to an almost identical bucranium pendant from Enkomi: Karageorghis 1991, p. 41.

[146] Ben Basat 2011, p. 187.

[147] There is nothing to suggest that the fragment of flat gold sheet with wire decoration from 'Ajjul is a broken bucranium pendant, *contra* Goring (1983b, p. 400, fn. 106). Refer to Petrie 1934, pls. 17 and 18, no. 109.

[148] Kanta 2005. Painted jugs at Karphi and Enkomi demonstrate the influence of Crete and Cyprus on each other during the Late Helladic IIIC: Kanta 1998, p. 47.

[149] Maran 2006, n. 21, fig. 8:4a; Konstantinidi-Syvridi 2015, p. 149. For further discussion of bucrania pendants, see also Vlachopoulos 2012.

[150] Vlachopoulos 2012.

[151] Marinatos 1986, pp. 51–72.

[152] Dikaios 1969–1971, pp. 183, 195, 197–198.

[153] Paule 2011, p. 159.

[154] E.g., Kition Tomb 9, no. 295: Karageorghis 1968, pl. 31:4.

[155] Paule 2011, p. 159.

[156] Paule 2011. The use of bull iconography in the Cypriote Bronze Age repertoire is arguably the hybridisation of social practice within the eastern Mediterranean sphere: Knapp 2008, p. 279. Regarding the identification of a specialist workshop at Tiryns, refer to Brysbaert and Vetters 2010.

4.3.3.4 Subtype 1III.d: Hoop with semi-stylised bucranium pendant (20 units)

Description: This version of the bucrania pendant is also fashioned from two embossed halves soldered together. Generally, the pendant is trapezoidal in shape and ends in a cylindrical snout detailed with a border of one or more lines of granulation. The suspension hoop is once again threaded through collared perforations that are located above the ears; these ears are represented by a single globule either side of the forehead. The chased decoration takes the form of embossed volutes and spirals.

Chronology: Stylised versions of this earring exist contemporaneously with realistic bucrania. In the Aegean, this subtype occurs in Late Helladic IIIB–C, and in Cyprus, in Late Cypriote I-III.

Materials: This earring is made only of gold.

Context: In this dataset, examples from Cyprus come from Enkomi (nos. 1830–1831, 2029–2031, 2033, 2035–2037, 2164 and 2174), Maroni (no. 2364), and Pyla-*Kokkinokremos* (nos. 2387, 2383–2385; **Fig. 41:III.d**). In the Aegean, two examples come from Perati (nos. 1737.057 and 1737.134).

4.3.3.5 Subtype 1III.e: Hoop with overtly-stylised bucranium pendant (4 units)

Description: An overtly-stylised pendant of triangular shape with a domed head and a circular section. The pendant ends in a cylindrical snout bordered by parallel lines of granulation. The ears are represented by a single globule on either side of the forehead.

Chronology: Overtly-stylised examples are contemporaneous with other subtypes of bucrania.

Materials: These earrings are made of gold.

Context: This subtype is a rare variety, occurring only at Enkomi (no. 2154; **Fig. 42:III.e**), at Hala Sultan Tekke (no. 2189), and at Perati (no. 1737.029). The Enkomi and Perati examples have decorative antithetic spirals worked in fine wire and bordered by lines of granulation, while the Tekke example has a scale-like pattern.

4.3.4 Type 1IV: Annular Hoops

4.3.4.1 Subtype 1IV.a: Small plain annular hoop (9 units)

Description: Annular hoops made of wire appear with abutting tapered terminals or with tapered overlapping ends. These forms have top-opening terminals.

Chronology: In the southern Levant, this subtype is limited to the Iron Age I, except for one Philistine example from Gath (no. 17; **Fig. 42:IV.a**) that possibly dates to the Late Bronze Age–Early Iron Age transition. In the Aegean, small hoops mainly date to the Submycenaean and Early Protogeometric, although earrings make their first appearance on Crete *ca.* 1700 BCE as simple hollow gold hoops.[157]

[157] Mycenaean seals indicate both males and females wore these hoops: refer to Younger 1988, pp. 255–256.

Materials: These earrings are made of gold, silver, or copper alloy.

Context: Ten examples in this dataset come from the southern Levant; these include earrings from Gath (no. 17), Beth Shean (no. 148), Far 'ah (nos. 560, 574 and 626), and Megiddo (nos. 839 and 841). Aegean examples come from Subminoan contexts at Lefkandi.[158]

4.3.4.2 Subtype 1IV.b: Large plain annular hoop (103 units)

Description: These wire hoops generally have a body of regular thickness, except for the ends that taper to rounded or fine points. The terminals variously abut, overlap, have hooked terminals for catching the opposite side, or twist around their opposite side. These hoops are larger than Subtype 1IV.a and generally do not have a swell at the base. Like the smaller hoops, these earrings are also top-opening and are formed of either a solid rod, foil over a solid core, or rolled sheet-metal that is hollow with hammered terminals. On all the examples from Kouklia, the edges of the gold-sheet are visible to the naked eye.[159]

Chronology: Most of these hoops date to the Late Cypriote II–III, although the subtype continues to appear into the Cypro Geometric II.

Materials: Usually, these earrings are of gold, although Maroni yielded one of silver.[160]

Context: This earring is extremely common in Cypriote burial contexts; funerary deposits sometimes include hoop earrings *in situ* at either side of the skull.[161] Amongst the Cypriote sites surveyed, this subtype is absent only at Pyla-*Kokkinokremos*. Early examples in silver and gold come from XIIth Dynasty 'Ajjul[162] and from Megiddo Stratum XIII.[163] There are examples of both male and female Cypriote figurines having pierced earlobes, and in some cases, still wearing hoop earrings.[164]

Discussion: These objects are inconsistently classified within the literature; therefore I classify them as earrings or hair ornaments based on form. When the overlap of these hoops is less than half a turn, I consider them earrings, but when greater than half a turn, I consider them hair spirals, as their form would have made them difficult to insert into the earlobe.

4.3.4.3 Subtype 1IV.c: Large annular hoop with swollen base (12 units)

Description: The literature sometimes describes this earring as boat-shaped. This subtype is similar to Subtype 1IV.b but is generally hollow (or sometimes foil over a solid core) with

[158] Some fragments of spiral wire are not conclusively earring elements: see pl. 95 Tomb 15B.15: Catling and Catling 1980, p. 248, pls. 98–99; Popham *et al.* 1979, pls. 94:10.7, 98:19.9, and 99:22.2–4; Desborough 1972, p. 303, pl. 60c.
[159] Karageorghis 1983, p. 113, fig. 131.
[160] Johnson 1980, no. 20, pl. 9; Åström, L. 1972, p. 498.
[161] E.g., Swedish Tombs 11 and 18 at Enkomi.
[162] Petrie 1933, pl. 14.
[163] Loud 1948, pl. 225.
[164] Refer to Goring 1983b, p. 400, fn. 114 and 116.

a pronounced swell at the base. The swollen base is at times slightly plano-convex (with the flat side on the inner curve), perhaps as the result of the craftsperson curving the object over a mandrel. The tapered terminals are top-opening.

Chronology: Most of these earrings date to Late Cypriote II–III, but they also appear into the CA I.

Materials: These earrings are of precious metals such as gold or silver.

Context: This subtype is limited to Cypriote sites in this dataset; it occurs at all the sites surveyed, although it is arguably a Near Eastern form.[165] Outside of Cyprus, these earrings come from the Late Minoan Mavrospilio tomb,[166] and from New Kingdom Egypt and Nubia.[167] They also occur in the Levant at Late Bronze Age 'Ajjul[168] and Lachish.[169] Other than one example from the gold hoard at Pyla-*Kokkinokremos* (no. 2380),[170] these earrings all derive from burials.

4.3.4.4 Subtype 1IV.d: Twisted hoop (19 units)

Description: This decorative hoop can be manufactured by various means. The most common earring is strip-twisted, whereby the craftsperson solders two strips of sheet-metal that are longitudinally folded back-to-back, so that they create an X cross-section. The object is then twisted and bent into a crescent shape with the ends hammered to form tapered and top-opening terminals. Alternatively, a square rod of metal might be twisted into a torque style.

Chronology: This subtype is limited to Late Cypriote I–III.[171] Although up to one dozen of these earrings predate the 14th century, the majority fall close to this date, and then the form disappears by the 12th century.

Materials: All examples in this dataset are made of gold, although they can occasionally be made of silver.[172]

Context: In Cyprus, archaeologists have discovered at least 35 strip-twisted earrings made of gold. In this dataset, these earrings are limited to examples from Enkomi. Block-twisted Late Bronze Age earrings come from 'Ajjul,[173] Lachish[174] and Megiddo.[175] The Babylonian

[165] Åström, L. 1972, p. 563.
[166] Forsdyke 1926–1927, pl. 18.111:3.
[167] Åström, L. 1972, p. 569.
[168] Maxwell-Hyslop 1971, pp. 115–116, pl. 75a, fig. 71.
[169] Tufnell 1940, pl. 26.
[170] Karageorghis and Demas 1984, pl. 28; Gjerstad *et al.* 1937, pl. 315:1; Gjerstad *et al.* 1935, p. 899, n. 722.
[171] For extensive discussion of these earrings, see Hawkes 1961, pp. 448–449.
[172] Gjerstad *et al.* 1934, pls. 78:49, 80:27, 139, 155, 145:10.
[173] E.g., Petrie 1933, p. 7, pls. 14:9 and 21:202; 1934, p. 8, pls. 13, 17, 18:105; Barnett 1951, pl. 28:18.
[174] Tufnell *et al.* 1940, p. 66, pl. 26:18.
[175] Loud 1948, pp. 5, 168, pl. 225.

Dilbat hoard contained Middle Bronze Age pieces similar to Cypriote examples.[176] A strip-twisted example from Ras Shamra differs in that it includes a small central small wire between the two larger strips.[177] While the block-twisted variety apparently belongs to the Levantine mainland, the strip-twisted variety seems to belong to Cyprus.[178]

Discussion: A 1961 study of jewellery from both the Aegean and Near East focused specifically on Bronze Age earrings. This study queried whether the transmission of strip-twisted earrings to both Cyprus and to the southern Levant was the direct result of Near Eastern trade with the Aegean.[179] Subsequent studies have proven that similar (but thinner) earrings from Ireland are flange-twisted rather than block or strip-twisted, and their presence there corresponds with the end of this subtype in the Near East.[180]

4.3.4.5 Subtype 1IV.f: Hoop with swollen base (1 unit)

Description: This is a small earring with a round hoop and a swell at the base. Both terminals end in fine hooks that overlap at the top.

Chronology: Subtype 1IV.f dates from Late Cypriote II.

Material: This earring is made of gold.

Context: In this dataset, one example with visible hammering marks and inclusions comes from Tomb 10 at Enkomi (no. 1786; **Fig. 42:IV.f**), which can be compared to another example from Tomb 11.[181]

4.3.5 Type 1V: Annular Hoops with Attached Pendant

4.3.5.1 Subtype 1V.a: Plain with attached row of granules (2 units)

Description: This earring usually appears as a rounded solid hoop with top or side openings, and with granules soldered at equal intervals along the hoop's lower edge. Like the mulberry earring, craftspeople could manufacture this earring in moulds, as the discovery of moulds from Late Bronze Age Beth Shean and Iron Age Samaria indicates.[182]

[176] Maxwell-Hyslop 1971, pp. 88–91. A necklace within the Dilbat hoard, with a rosette, crescent and assorted other pendants, is so similar to an 'Ajjul piece that it was possibly made in the same workshop. The necklace is attributed to 1625–1550 BCE by Madeleine Trokay (1985, pp. 21–44) on the basis of comparison of granulated objects including the granulated earrings at 'Ajjul. Lilyquist (1994, p. 29) dates the necklace to the end of the Old Babylonian period, *ca.* 1700–1600 BCE.

[177] Schaeffer 1962, p. 308, fig. 6. Tomb 57 at Ras Shamra contained both Minoan ware and possible Cretan imitations: Kantor 1947, p. 19. Rubinson 1991, pp. 384–385.

[178] Alternatively, possibly even Syria: Higgins 1980a, p. 88, pl. 12D.

[179] Hawkes 1961, p. 448.

[180] Hawkes 1961, p. 462.

[181] Cf. Enkomi Tomb 11: Gjerstad *et al.* 1934, pl. 145:9.

[182] Beth Shean: Rowe 1940, pl. 53A:8; Samaria: Reisner *et al.* 1924, pl. 68:n.

Chronology: Examples that date from the Late Bronze Age are top-opening. By the Iron Age, this subtype usually opens on the side, although those from Tawilan are top-opening. One from Jemmeh may also date to the 10th century.[183] This form continues from the Iron Age II into the Persian period in the southern Levant, as well as in Syria, Anatolia, and western Asia Minor.[184]

Materials: These earrings are made of gold.

Context: A gold hoard from Tawilan included two of these earrings (nos. 1468 and 1469; **Fig. 42:V.a**), one of which was missing some granules.[185] These earrings have a central cluster of granules, similar to mulberry earrings. This example from Tawilan with the central cluster of grains flanked by three individual grains at either side is rare in the Early Iron Age, with only one other example coming from Eshtemoa.[186]

Discussion: Several Iron Age statues (male and female) depict this earring, including those from Khirbet el-Hajjar,[187] Jawa,[188] and the Amman Citadel.[189]

4.3.5.2 Subtype 1V.b: Top-opening hoop with 'mulberry' cluster (21 units)

Description: This earring is composed of a top-opening hoop with a slight swell at the base that is sometimes hollow, as in an example from Kouklia.[190] The mulberry pendant soldered to the body usually consists of three large drops or granules with another final drop attached to their base. At Kouklia-*Skales*, a disc also separates the granules and the hoop.[191] Alternatively, craftspeople could manufacture this earring in moulds.[192] The size of the drops varies from earring to earring, and at times, additional drops create a prong or elongated cluster.[193]

Chronology: Most Cypriote examples date to the Late Cypriote I–III, although this subtype does continue through to Cypro Geometric II.

Materials: This earring is made of gold or silver.[194]

[183] Golani 2013, p. 113.
[184] For references, see Golani 2013, pp. 113–114.
[185] Ogden 1995, nos. 10–11, fig. 8:20.
[186] Although recent debates suggest this example dates to the eighth century: refer to Kletter 2003, pp. 139–152. Cf. a 10th to ninth centuries date by Yeivin (1990, p. 57).
[187] Ibrahim 1971, pl. 1; Khairi 1970, pl. 1f.
[188] Daviau 2002, pp. 58–59, fig. 2.29:1.
[189] Dornemann 1983, fig. 90:1.
[190] Karageorghis 1983, fig. 51, pl. 25.
[191] Karageorghis 1983, p. 420, T. 67:50, fig. 2, T. 87:10, T. 43:82 and T. 79:94.
[192] See, e.g., a mould found at Fakhariyah, Syria: Vermeule 1967, fig. 3:b.
[193] E.g., Enkomi, BM 1897,0401.150: Marshall 1911, p. 545; Goring 1983b, no. 379; Crewe *et al.* 2009, no. 19.70.
[194] In silver it is also from Enkomi: Gjerstad *et al.* 1934, pl. 145:13; and from Tomb 956 Far'ah: Petrie 1932, pl. 50:99; Laemmel 2003, pl. 333.

Context: All examples in this dataset derive from Cyprus. In the Late Cypriote period, top-opening mulberry earrings constitute one of three main forms of earring.[195] They also appear as regular features in the hoards and tombs of the Late Bronze Age southern Levant, such as at Megiddo[196] and at 'Ajjul.[197] Earrings with one granulated appendage also occur in the Late Bronze Age Aegean.[198] Some examples from Cyprus are more intricately decorated with fine wire that coils around the hoop at either side of the mulberry attachment;[199] these parallel a seventh century silver pair from Mt Ziyyon, Jerusalem.[200] Although lunate, rather than hoops, the decorative earrings from Tawilan (nos. 1463–1464) include both the disc and wire wound around the body of the hoop and thus they bear a strong resemblance to Cypriote earrings.[201] A variation of the mulberry earring with an elongated cluster comes from an Ottoman burial in northern Tel Aviv; this earring was possibly looted from nearby Qasile in antiquity and then kept as a curio.[202]

Discussion: Usually, this subtype is identifiable as an earring, although it could also function as a nose ring, as suggested by a gold example found by archaeologists *in situ* within a Late Bronze Age burial at Megiddo.[203] An elongated example from Ras Shamra also resembles tassel earrings,[204] as does a similar example from Basta in Egypt.[205] The jewellery hoard from Basta contains several other objects that display Levantine, Cypriote, and Aegean characteristics; it is possible that Levantine artisans produced these objects for Levantine residents.[206]

4.3.5.3 Subtype 1V.c: Plain with triple 'mulberry' attachment (1 units)

Description: These earrings are similar to standard mulberry earrings. Usually, this subtype has a top-opening, annular hoop and three clusters or prongs of granules, one suspended from the base of the hoop and another one at either side.

Chronology: This earring dates from the Iron Age IIA.

Materials: Subtype 1V.c is made only of gold.

[195] E.g., Old Tombs 57 and 58. BM no. 472076: Maxwell-Hyslop 1971, p. 131, pl. 96; Tomb 8: Hawkes 1961, p. 450.
[196] Guy 1938, pl. 115:10.
[197] Petrie 1931, pls. 16:70–71, 75–76, 18:82, 102–103, 125–126, 20:142–143, 20:148, and 21:201. Also the Governor's tomb, Petrie 1933, pl. 14:2–4 and 14:27; 1934, pls. 14:28:9 (Hoard 1299) and 16:201 (Group 1532); Barnett 1951, pl. 28:12; Maxwell-Hyslop 1971, figs. 79–80, pl. 77.
[198] Kardara 1961.
[199] Lapithos 420.21: Gjerstad *et al.* 1934, pls. 4, 155:8–9, 11. At Kouklia the wire can also coil beneath the granules: T.85:101: Karageorghis 1983, fig. 179, pl. 179.
[200] Israel Antiquities Authority, no. 1975–1199.
[201] Ogden 1995, p. 72, fig. 8:17.
[202] Amir Golani (pers. comm.).
[203] Tomb 2121: Loud 1948, pl. 225:9.
[204] Schaeffer 1939, p. 44, fig. 31.
[205] Maspero 1907, 1–3–104, pl. 50. If this earring had been of unknown provenance, the excavators might have dated it to the Roman period given its similarity to third century CE earrings found in the Nile Delta, however, this subtype was widespread and long-lived: pp. 96–97.
[206] Lilyquist 2012, p. 20.

Context: A single example comes from the gold hoard from Tawilan (no. 1470; **Fig. 42:V.c**).[207] Another simple top-opening earring comes from a Late Bronze Age context at Ajjul.[208] Three-pronged examples are not seen in Greece and Cyprus prior to a pair dated to the Early Iron Age at Lefkandi.[209]

Discussion: In the Aegean, this subtype might be a revival of a Mycenaean form that continued to have a long history of use in Greece, as its depiction on sixth century vase paintings suggests. Although opinion is divided,[210] they are generally identified as the *Hermana triglena moroenta* (*Iliad*, 14. 183) or the three-pronged earrings worn by Hera in Homer's *Iliad*; Eurymachus, one of Penelope's suitors, also presents her with a pair in *The Odyssey* (18. 298). These earrings recall the intriguing hoops from Subprotogeometric Lefkandi that have three wire cones, which is an earring style unknown elsewhere in the eastern Mediterranean, although a Phoenician influence is possible.[211]

4.3.5.4 Subtype 1V.d: Hoop with bucranium-inspired cone (11 units)

Description: The earring incorporates a solid hoop to which is attached a granulated cone, often ending in a single drop. The stylised granulated cone may derive from the granulated bucranium earring. Cypriote examples have a flattened and granulated cone appendage, and a ring of fine wire that encircles the cone at its join with the earring body. The granulation often extends up the underside of the earring arms. Occasionally this earring also has small, coiled hoops either side of the cone that might represent ears.[212]

Chronology: In the Aegean, this subtype dates to Late Minoan IIIA–B on Crete,[213] and to Late Helladic III on the mainland. This earring also appears in Late Cypriote I–III Cypriote tombs.

Materials: This subtype is made only of gold.

Context: These earrings occur in burial contexts in Cyprus at Enkomi, Hala Sultan Tekke, and Maroni.[214] A few similar earrings come from Alalakh, where they date to 1447–1370 BCE.[215]

Discussion: Although one might suggest that these earrings are Cypriote imports when they occur in the Aegean, some scholars argue that they are a local development of the mulberry

[207] Ogden 1995, no. 13, fig. 8:22.
[208] Barnett 1951, pl. 28:12.
[209] T5 from the Subprotogeometric cemetery dates from the ninth century BCE: see Popham *et al.* 1979, pl. 231d.
[210] Maxwell-Stuart 1987, pp. 411–415. Cf. Kardara 1961, pp. 62–64.
[211] T38.41: Higgins 1980b, pl. 231.d; Popham and Lemos 1996, pl. 136.c. Cf. Konstantinidi-Syvridi, who argues for a local development: Konstantinidi-Syvridi 2015, p. 153.
[212] E.g., Enkomi: Gjerstad *et al.* 1934, pl. 80.2:7; Fisa: Cyprus Museum CS.1886/1; and Maroni: Marshall 1911, pl. 4:538.
[213] E.g., Knossos, Mavrospilio Tomb 7, Olous Tomb 22 and 16, Palaikastro, Phaistos, and on the Kephala Ridge: Higgins 1980a, p. 72. See also Marshall 1911, pp. 320–379, 470–507, 510–511, 537–545.
[214] Cf. the 'ears' on an example from Fisa: Cyprus Museum CS.1886/1.
[215] Woolley 1955, pl. 69:g and 69:h.

earring, which in fact influenced Cypriote jewellers.[216] Åström claimed that Late Minoan examples of this earring on Crete 'developed independently from a common, probably Cypriote, origin' as those from Cyprus tend to be smaller and without the ball at the tip of the cone.[217] If in fact these earrings did develop from mulberry earrings, the prevalence of that subtype in Cyprus and the Near East supports a Cypriote development for the granulated cones.[218] Furthermore, the ear-like loops at the top of some Aegean cones and the similarity of the cone's shape to the overtly-stylised bucrania from Cyprus support a relationship between the two subtypes and a Cypriote development for this subtype.

4.3.6 Type 1VI: Slings

4.3.6.1 Subtype 1VI.a: Broad sling hoop (3 units)

Description: This rare earring has a small annular hoop with its lower portion flattened and an upper tapered hook.

Chronology: This earring dates to the Iron Age I.

Materials: All examples are of copper alloy.

Context: This earring comes from the Baq'ah Valley (nos. 1037–1039; **Fig. 42:VI.a**).

4.3.6.2 Subtype 1VI.b: Multiple-lobed 'sling' (3 units)

Description: These solid or hollow lunate earrings consist of double or triple wires that taper towards the ends. The wires are soldered side-by-side, and they then bend over to meet at one side. This northern form has the appearance of a broad hammock-like sling.

Chronology: This earring mainly dates to Late Bronze Age II, but it also occurs through to the Persian period. When found in Iron II contexts, it is possibly an heirloom.[219]

Materials: This earring is usually of gold or silver, but it is occasionally of copper alloy.

Context: In this dataset, this earring occurs in a hoard from Beth Shean (no. 131) and in burials at Far'ah (nos. 492 and 641; **Fig. 42:VI.b**). These earrings are comparable to other Early Iron Age two- or three-lobed examples from Eshtemoa[220] and Wadi el Makkuk,[221] and Late Bronze Age examples from Far'ah[222] and Dan.[223] These earrings have a long tradition,

[216] See examples from Mavrospilio, Kephala Ridge, Palekasto, and Olous: Higgins 1980a, p. 72.
[217] Åström, L. 1972, pp. 571–572.
[218] Granulation, missing in the later stages of the Late Bronze Age, was possibly re-introduced from the Near East and does not reappear in the Aegean before the mid-ninth century BCE: Higgins 1980b, p. 221.
[219] Golani 2013, p. 101.
[220] Yeivin 1990, fig. 16:8.
[221] This example is of somewhat different construction, as flattened lines in the lunate create the tripartite division: Sass 2002, p. 24, fig. 3.
[222] Petrie 1932, pl. 48:19.
[223] Biran and Ben-Dov 2002, fig. 2:135.

appearing with three to seven lobes at Early Bronze III Troy and Tarsus, and appearing in the southern Levant from the Middle Bronze Age.[224]

4.3.6.3 Subtype 1VI.c: Broad staple hook (3 units)

Description: This earring is formed in much the same way as the broad sling hoop (Subtype 1VI.a), with the added feature of having the lower hoop bent into a square shape.

Chronology: This subtype dates to Iron Age I.

Materials: This earring is made of copper alloy. Metallurgical analysis of one hook from Baq'ah (no. 1045) indicates a high level of lead (7.56 per cent), and that the object was mechanically worked prior to annealing.[225]

Context: Like the flattened hoop subtype, this hook earring comes only from Baq'ah (nos. 1043–1045; **Fig. 42:VI.c**).

4.3.6.4 Subtype 1VI.d: Decorative sling (4 units)

Description: These hoops are made of two opposing pairs of twisted strips of gold-sheet placed side-by-side so that they look like a band formed of two plaited rows. Each strip has roughly cut and deliberately notched edges, and the hammering of the strips' ends creates tapered and overlapping terminals. A more detailed variety is composed of a small delicate hoop with a flat band made of six fine wires positioned side-by-side (one plain, one twisted, two plain, one twisted, and one plain).

Chronology: These earrings mainly date to the Late Cypriote IIIA period, although at Enkomi they appear as early as Late Cypriote I.[226] In the Aegean, a single example dates to Late Helladic IIIB–C.

Materials: All examples are of gold.

Context: Three examples in this dataset come from Hala Sultan Tekke. Two of these earrings come from a jewellery hoard in Area 8 East (nos. 2176–2177), and a third comes from a burial (no. 2200; **Fig. 42:VI.d**).[227] These earrings are comparable to some from Enkomi[228] and Maroni.[229] The single Aegean example comes from Tomb 9 at Perati (no. 1737.025).

[224] E.g., these multiple-lobed earrings come from Beth Shean. For discussion and bibliography, see Golani 2013, p. 101.

[225] I.e., reheating of the metal to a high temperature and allowing it to cool slowly to keep it pliable: McGovern 1986, fig. 85:18.

[226] Dikaios 1969–1971, pp. 417–418, pls. 161:71 and 219:14.

[227] The records list earring no. 2200 as coming from the 1898 British Museum excavations, but it is possibly from the 1897 British Museum excavation of Tomb 6: Bailey 1976, p. 4.

[228] Åström, L. 1972, p. 501, figs. 65:10 and 569; Tomb 22: Dikaios 1969–1971, pp. 417–418, pls. 161:71 and 219:14.

[229] Tomb 25, CM J69.

4.3.7 Type 1VII: Undefinable Shapes and Fragments

Description: Within all categories of jewellery are fragmentary pieces of metal that are identifiable as items of jewellery, although it is unclear to what subtype they might belong. In the case of earrings, there are divisions for plain earrings (Subtype 1VII.a — 1 unit), decorated earrings (Subtype 1VII.b — 1 unit), and earrings for which there is no information (Subtype 1VII.c — 28 units).

4.4 CATEGORY 2: RING TYPOLOGY

This category is divided into the following subheadings: (1) *finger rings*; (2) *toe rings*; (3) *finger rings with a bezel*; (4) *spirals*; and (5) *indefinable shapes and fragments.* These subcategories have further subdivisions according to style; for example, subdivisions distinguish between rings that are closed, overlapping, plain, or decorated. In the database, a ring's *diameter* is the exterior diameter of the hoop, its *width* is the width of the hoop measured parallel to the finger, and its *thickness* is the thickness of the hoop measured perpendicular to the finger. I classify any annular form that is less than 30 mm in diameter as a ring, as those greater than 30 mm in diameter are too large to serve as conventional rings; perhaps these served as earrings, nose rings, hair rings, or even bangles for infants. Toe rings usually have a diameter of less than 18 mm, but their identification is only assured when they are found *in situ.* In order to manufacture most subtypes, molten metal was poured into clay or stone moulds to form a rod, which was then annealed and hammered. The flattened sections and tapered ends of some rings are most likely the result of such hammering.[230] Alternatively, the objects could be made of a block-twisted or strip-twisted strip of metal-sheet. Type 2III rings with decorative bezels constitute the most complex forms in terms of construction, technological skill, materials, and significance.

4.4.1 Type 2I: Finger Rings

4.4.1.1 Subtype 2I.a: Closed plain

4.4.1.1.1 *2I.a.i: Closed plain with circular section (25 units)*

Description: This simple ring consists of a round metal wire or rod with its terminals fused together.

Chronology: This is a common ring in the southern Levant and dates from the Middle Bronze Age. During the Iron Age, this subtype appears more frequently during the earlier part of that period. In this Aegean, this subtype dates to Late Helladic IIIB–C.

[230] The point at which the metal was bent should show strain marks upon analysis, e.g., by X-ray diffraction analysis: Brody and Friedman 2007, p. 102, fn. 8–9.

Materials: This subtype is made of copper alloy, silver, or lead.[231]

Context: In this dataset, Subtype 2I.a comes from sites across Cisjordan, and from Perati in the Aegean.[232]

4.4.1.1.2 *2I.a.ii: Closed plain with flat section (10 units)*

Description: This ring is similar to Subtype 2I.a.i, but it consists of a flat strip of metal that has its terminals joined together.

Chronology: This ring dates to Iron Age I–IIA in Cisjordan, and to Late Helladic IIIB–C and Submycenaean in the Aegean.

Materials: Subtype 2I.a.ii is made of gold, silver, copper alloy, or iron.

Context: The few rings of this subtype occur within burials in Cisjordan and in the Aegean.

4.4.1.1.3 *2I.a.iii: Closed plain with ovoid section (5 units)*

Description: This ring is similar to Subtype 2I.a.i, but hammering on either side of the wire creates an elliptical section. Often the wire is hollow, as can be seen in the section of fragmentary pieces.

Chronology: This ring dates to Late Helladic IIIB–C in the Aegean.

Materials: This subtype is made of copper alloy, silver, or gold.

Context: Subtype I.a.iii occurs within burials at Perati in the Aegean.

4.4.1.1.4 *2I.a.iv: Closed plain with lentoid section (7 units)*

Description: This ring is similar to Subtype 2I.a.ii, but hammering on either side of the wire creates a lentoid or almond-shaped section. Like Subtype 2I.a.viii, often the wire is hollow.

Chronology: This ring dates to the Late Helladic IIIB–C and Submycenaean–Early Protogeometric in the Aegean.

Materials: This subtype is made of gold, copper alloy, or iron.

Context: Examples in this dataset occur only within Aegean burials at Kerameikos (nos. 1494, 1503–1504; **Fig. 43:I.a.iv**), at Lefkandi (no. 1712), and at Perati (nos. 1737.002, 1737.007, and 1737.013).

[231] This ring is often found in non-metallic materials such as faience, e.g., at Ekron: Golani 1996, p. 43, No. 1306, fig. 10–11; and Beth Shean: Rowe 1940, pl. 29:11.

[232] Apparently, this subtype is also common elsewhere in the Aegean: Lemos 2002, p. 116.

4.4.1.1.5 *2I.a.v: Closed plain with plano-convex section (20 units)*

Description: This is a simple ring of plano-convex wire with its terminals fused together.

Chronology: This subtype dates to Iron Age I in Cisjordan, and to Late Helladic IIIB–C, Subminoan, Submycenaean, and Early Protogeometric in the Aegean. In the Aegean, this chronological range does not accurately reflect general trends; for example, despite a decline in the popularity of finger rings in Athens, the opposite is true for the Argolid.[233]

Materials: This ring is typically made of copper alloy, but occasionally of gold, silver, or iron.

Context: In Cisjordan, only one example comes from Far'ah (no. 485). In the Aegean, Late Helladic IIIB–C examples come from Perati, Subminoan examples come from the Knossos North Cemetery, and Submycenaean examples come from Kerameikos. At Lefkandi, five plain bronze plano-convex rings come from Submycenaean contexts and three come from Early Protogeometric contexts.[234] In Cyprus, one ring from Hala Sultan Tekke (no. 2213) is similar to Subtype 2I.a.v, but it has an unusual plano-bicone section with a steep carination.

4.4.1.1.6 *2I.a.vi: Closed plain with oversized section (6 units)*

Description: This subtype has a plano-convex or plano-bicone section. The width of these rings range from 9–15 mm and they often exceed 3 mm in thickness, making them quite large and bulky. Occasionally, scholars describe these rings as hair rings.[235]

Chronology: This ring dates to the Submycenaean through to the Protogeometric period in the Aegean.

Materials: Subtype 2I.a.vi is made of copper alloy or iron.

Context: This subtype appears only within Aegean burial contexts at Kerameikos (no. 1575; **Fig. 43:I.a.vi**), at Lefkandi (nos. 1650 and 1692), and at Marmáriane (nos. 1729 and 1733).

4.4.1.2 Subtype 2I.b: Open-ended plain

4.4.1.2.1 *2I.b.i: Open-ended plain with circular section (70 units)*

Description: This common subtype is a simple ring of wire with blunt or tapered terminals.

Chronology: This ring dates to Late Bronze Age–Iron Age IIA in the southern Levant, to the Late Helladic IIIB–C and Submycenaean in the Aegean, and to Late Cypriote I–III in Cyprus.

[233] Lemos 2002, p. 116.
[234] See also Early Protogeometric rings S.31.4, S.32.7: Catling and Catling 1980, p. 248.
[235] Heurtley and Skeat 1930–1931, p. 36, fn. 4.

Materials: The examples in this dataset are made of the full range of metals.

Context: In this dataset, only four rings come from Ekron in Philistia,[236] but this subtype is common in Cisjordan and Transjordan. In the Aegean, two examples come from Kerameikos (nos. 1502 and 1583) and three examples come from Perati (nos. 1737.020, 1737.056, and 1737.145). In Cyprus, one example comes from Maroni (no. 2340).

4.4.1.2.2 *2I.b.ii: Open-ended plain with elliptical section (4 units)*

Description: This uncommon variation of the open-ended ring has its (often hollow) wire hammered along its length to create an elliptical or ovoid section. This ring has tapered terminals.

Chronology: This subtype dates to Iron Age I–IIA in Cisjordan and to Late Helladic IIIB–C in the Aegean.

Materials: This ring is made only of copper alloy.

Context: This subtype occurs within burial contexts at Far'ah (no. 433) and Nasbeh (no. 920; **Fig. 43:I.b.ii**) in Cisjordan, and at Perati (nos. 1737.074–1737.075) in the Aegean.

4.4.1.2.3 *2I.b.iii: Open-ended plain with lentoid section (16 units)*

Description: This is an open-ended ring formed from a wire hammered on either side to create a lentoid or almond-shaped section. This ring has tapered terminals in the southern Levant, and has blunt terminals in the Aegean.

Chronology: This ring dates to Late Bronze Age–Iron Age IIA in the southern Levant, and to Late Helladic IIIB–C and Submycenaean in the Aegean.

Materials: This subtype is typically made of copper alloy, although one example is of iron (no. 1223) and another is of silver (no. 1737.022).

Context: One example comes from Ekron in Philistia (no. 96), and a limited but broad distribution occurs elsewhere in the southern Levant. In the Aegean, these rings come from the Kerameikos cemetery (nos. 1485, 1491 and 1522) and from Perati (no. 1737.022).

4.4.1.2.4 *2I.b.iv: Open-ended plain with flat section (46 units)*

Description: This ring is formed using a flat strip of metal with squared-off terminals. One example from Kerameikos (no. 1527) also has a central circumferential ridge.

Chronology: This subtype dates to Late Bronze Age–Iron Age IIA in the southern Levant and to Late Helladic IIIC and Submycenaean in the Aegean.

Materials: Subtype 2I.b.iv is made of copper alloy or iron.

[236] Golani 1996, p. 41.

Context: These rings are reasonably common in the southern Levant, and come from Kerameikos, Lefkandi, and Perati in the Aegean.[237]

4.4.1.2.5 *2I.b.v: Open-ended plain with plano-convex section (15 units)*

Description: This ring is formed from a plano-convex rod with tapered or blunt terminals.

Chronology: This subtype dates from Late Bronze Age–Iron Age I contexts in the southern Levant, and to Late Helladic IIIC and Submycenaean contexts in the Aegean.

Materials: Subtype 2I.b.v is made of copper alloy, silver, or gold.

Context: Examples in this dataset come from Far'ah in Cisjordan, from the Baq'ah Valley, Deir 'Ain 'Abata, and Sa'idiyeh in Transjordan, and from Kerameikos and Perati in the Aegean.

4.4.1.2.6 *2I.b.vi: Open-ended plain with oversized section (11 units)*

Description: This large ring, with widths of 8–17 mm and thicknesses up to 7 mm, has blunt terminals and various types of cross-section.

Chronology: In the Aegean, this ring dates to Submycenaean and Protogeometric.

Materials: This ring is made of either copper alloy or iron.

Context: Subtype 2I.b.vi comes from Kerameikos and from Marmáriane.

4.4.1.2.7 *2I.b.vii: Open-ended plain with encircling band (1 unit).*

Description: A narrow iron band encircles this open-ended ring.

Chronology: This ring dates to Early Iron Age.

Materials: Subtype 2I.b.vii is made of iron.

Context: Thus far, this subtype comes only from Gath (no. 60; **Fig. 43:I.b.vii**).[238]

4.4.1.3 Subtype 2I.c: Overlapping plain

4.4.1.3.1 *2I.c.i: Overlapping plain with circular section (57 units)*

Description: This simple ring is made from a metal wire or rod; its tapered terminals are overlapping and often offset.

Chronology: This ring dates to Late Bronze Age–Iron Age IIA in the southern Levant, to Submycenaean in the Aegean, and to Late Cypriote I–III in Cyprus.

[237] Laemmel considers this subtype to be rare at Far'ah despite it accounting for almost one quarter of all Early Iron Age rings from this site: Laemmel 2003, p. 257.

[238] Reg. no. 990232. Cf. another ring from Enkomi Level IIB: Dikaios 1969–1971, pl. 128.33, no. 1715. See also a band encircling the spring on a fibula from Kerameikos (no. 1500).

Materials: This ring can be made of most metals, although it is most frequently made of copper alloy.

Context: This subtype is common in Cis- and Transjordan, but in Philistia, it comes only from Ashdod (no. 8). In the Aegean, one example comes from Kerameikos (no. 1537),[239] while several come from Perati. In Cyprus, several rings also come from Maroni.

4.4.1.3.2 *2I.c.ii: Overlapping plain with elliptical section (13 units)*

Description: This ring is similar to Subtype 2I.c.i, but has an elliptical or ovoid section.

Chronology: This subtype dates to Late Bronze Age–Iron Age IIA in the southern Levant and to Late Helladic IIIB–C in the Aegean.

Materials: This ring is made of silver or copper alloy.

Context: Subtype 2I.c.ii has a limited distribution in the southern Levant at Far'ah (nos. 415 and 621; **Fig. 43:I.c.ii**), Nasbeh (nos. 890, 922–923, 942), and Deir 'Ain 'Abata (no. 1159). In the Aegean, it is only found at Perati.

4.4.1.3.3 *2I.c.iii: Overlapping plain with lentoid section (16 units)*

Description: This ring is similar to Subtype 2I.b.iii, in that it has a lentoid or almond-shaped section. In the southern Levant, Subtype 2I.c.iii occurs with tapered terminals, and in the Aegean, it occurs with blunt terminals. In either case, the terminals are overlapping and often offset.

Chronology: This subtype dates to Iron Age I in the southern Levant, and to Late Helladic IIIB–C and Submycenaean in the Aegean.

Materials: Subtype 2I.c.iii is made of copper alloy, and occasionally of silver.

Context: 'Eitun and Madaba yielded one example each (nos. 224 and 1187; **Fig. 43:I.c.iii**), but in the southern Levant, the majority of this subtype comes from the Baq'ah Valley. In the Aegean, one of this subtype comes from the Kerameikos cemetery (no. 1493) and another comes from Perati (no. 1737.021).

4.4.1.3.4 *2I.c.iv: Overlapping plain with flat section (34 units)*

Description: This ring is similar to Subtype 2I.b.iv; it is a flat metal strip with blunt overlapping terminals.

Chronology: This subtype is found in Late Bronze Age–Iron Age IIA contexts in the southern Levant, in Submycenaean–Early Protogeometric contexts in the Aegean, and in Late Cypriote I–III contexts in Cyprus.

[239] Apparently, this subtype appears in the Aegean from the Submycenaean to Protogeometric: Lemos 2002, p. 116.

Materials: Typically, this ring is made of copper alloy, but occasionally it is of iron or silver.

Context: In Philistia, this ring is limited to Ekron (no. 99), but many come from Cis- and Transjordan. This ring also occurs in limited quantities in the Aegean; like other versions of overlapping rings, it comes from both Lefkandi and Kerameikos.[240] The only example from Cyprus comes from Maroni (no. 2353).

4.4.1.3.5 *2I.c.v: Overlapping plain with plano-convex section (10 units)*

Description: This ring is similar to Subtype 2I.b.v; however, the terminals are often overlapping and offset. One example from Kerameikos also has a slight carination (no. 1563).

Chronology: This subtype dates to Late Bronze Age–Iron Age I in Cis- and Transjordan, and to Late Helladic IIIB–C and Submycenaean–Early Protogeometric in the Aegean.

Materials: Subtype 2I.c.v is usually of copper alloy, but occasionally of iron, silver, or gold.

Context: In the southern Levant, this subtype comes from Far'ah (no. 349; **Fig. 43:I.c.v**), Megiddo (no. 783), and Sa'idiyeh (no. 1333), and in the Aegean, it comes from Kerameikos (nos. 1481, 1559, 1563–1564), Lefkandi (no. 1695), and Perati (nos. 1737.045, 1737.048).

4.4.1.4 Subtype 2I.d: Decorative annular

4.4.1.4.1 *2I.d.i: Ring with bossed surface (40 units)*

Description: This sheet-metal ring has one or more ridges bossed up with a round-headed punch; sometimes, there is chasing within the grooves. This subtype is often quite thin and fragile, possibly as it had a funerary function.[241]

Chronology: This subtype is found within Late Helladic IIIB–C, Subminoan, and Submycenaean–Protogeometric contexts in the Aegean, and within Late Cypriote I–Cypro Geometric III contexts in Cyprus.

Materials: Subtype 2I.d.i is often made of gold, although occasionally it is made of silver or copper alloy.

Context: This subtype occurs in Aegean and Cypriote burial contexts. The burials at Perati and Kerameikos yielded multiple examples, while the Knossos North Cemetery yielded two examples (nos. 1623 and 1628). Apparently, the most common ring at Lefkandi is a bossed band with a convex exterior,[242] although only one example from that site is included in this dataset (no. 1646). Several Cypriote examples also come from Enkomi, Kouklia, and Maroni.

[240] Kraiker and Kübler 1939, p. 85, fig. 3.
[241] Catling 1996a.
[242] Higgins 1980b, n. 46.

Discussion: Variations of this ring include one example with a bossed up carination, and a less frequent one with multiple carinations.[243] Despite this subtype appearing at several sites in the Aegean, it is arguably of Cypriote origin.[244]

4.4.1.4.2 *2I.d.ii: Ring with engraving (12 units)*

Description: This ring typically has a flat band with overlapping terminals, and has a bezel-like widening created by flattening a section of the shank;[245] a craftsperson would then engrave (*intaglio*) the bezel with motifs or signs using a sharp tool. Variations include rings that have a circular section or closed bands.

Chronology: This ring dates mainly to the Iron Age I. One example from Far'ah dates to Iron Age I–IIA, although it is arguably an heirloom.[246] In the Aegean, decorative bands date to Submycenaean, and in Cyprus, they date to Late Cypriote III.

Materials: These rings are made of copper alloy, silver, or gold.

Context: Two examples made of copper alloy overlaid with silver foil come from Ekron (nos. 101–102); although neither example comes from a secure context, both belong to Stratum VI and are dated to the Iron Age I due to their similarity to rings from other Iron Age I contexts.[247] One ring has an incised design of three double rows of parallel lines and two rows of perpendicular short lines running between the rows (no. 101); the other (no. 102) has an intaglio design that is possibly of Hittite inspiration. Gold examples come from Far'ah (no. 592) and from Megiddo (nos. 833–834; **Fig. 43:I.d.ii**).[248] Three rings from Megiddo include one that has a geometric incised design within five panels separated by vertical ladders, each of which houses a five-pointed star; another that has four panels and four stars; and another that has a simple herringbone motif (no. 792). These rings are comparable to a silver object with incised borders and pseudo-hieroglyphs that was discovered within a hoard of *Hacksilber* in Iron Age I levels at Beth Shean.[249] Another ring from Beth Shean simply has incised borders (no. 183). Elsewhere in the southern Levant, this ring comes from 'Ajjul, Gerar,[250] and Nami.[251] Similar rings of silver and bronze that date to the same period also come from Hama in Syria.[252]

A simple copper alloy band from Lefkandi has a band of *tremolo*[253] decoration on an oblique angle (no. 1675); this technique is frequently associated with jewellery from the

[243] Higgins 1980b, n. 50.
[244] Higgins 1980b, p. 221; Catling 1996b, p. 531.
[245] Boardman 1967a, pp. 25–27.
[246] Golani 2013, p. 132.
[247] Nos. 4828 and 5140: Golani 1996, p. 44, fig. 10:2.
[248] Guy 1938, pl. 166:3–4.
[249] Refer to Thompson 2009, p. 607.
[250] Petrie 1932, pl. 18:249; Petrie 1928, pl. 20:50.
[251] Singer 1993.
[252] Riis 1948, pp. 127–128.
[253] The *tremolo* decoration is a finely traced and continuous zigzag line, formed with a tool called a 'scorper' that is rocked from side to side to impress the design: Higgins 1980a, p. 31.

northern regions of Greece and central Europe, where this decoration appears on bangles (see Type 3V).[254] In Cyprus, an engraved ring made of silver from Hala Sultan Tekke depicts a scene with an altar flanked by two seated griffins. These griffins face outwards towards figures on either side; a winged disc hovers above the altar and a tree stands at each end of the scene (no. 2246). Another ring made of gold from Enkomi has three circumferential incised lines and hatched incisions on either side of the central line (no. 1752).[255]

Discussion: Rings with an intaglio design were possibly a symbol of rank or status — a simple version of Type 2III bezel rings. Although bearing some similarities to Type 2III rings, Subtype 2I.d.ii is much finer, and constructed by hammering rather than casting. Scholars consider this ring typologically Hittite.[256] The only cases in which the decorative elements are not of Hittite inspiration appear to be one ring from Megiddo with a herringbone design (no. 792), and rings with somewhat similar designs from Lefkandi (no. 1675) and Enkomi (no. 1752). The motifs on these three rings are more frequently associated with jewellery from the northern regions of Greece and central Europe.[257]

4.4.1.4.3 *2I.d.iii: Ring with attached knob (6 units)*

Description: These rings occur with plano-convex, square, or flat sections, and have a raised swelling or knob. It is not always possible to discern if these protuberances are intentional or the result of corrosive processes, which can sometimes inhibit one's ability to assess the construction of the object.

Chronology: This subtype dates to Iron Age I in Cisjordan, and to Submycenaean–Protogeometric in the Aegean.

Materials: This ring is made of copper alloy.

Context: One example from Megiddo has a twisted bezel-like knob (no. 835) and another from Far'ah has a knob-like protuberance (no. 558). The remaining examples derive from the Kerameikos cemetery (nos. 1514, 1532, 1579, 1604; **Fig. 43:I.d.iii**).

4.4.1.4.4 *2I.d.iv: Ring with applied wire decoration (1 unit)*

Description: This ring has a flat band with overlapping terminals and a circumferential rib of applied twisted wire.

Chronology: In Cyprus, this ring dates to Late Cypriote II–III.

[254] Snodgrass 1971, p. 320; Jacobsthal 1956, p. 210; Heurtley and Skeat 1930–1931, p. 35.
[255] Niklasson 1983, figs. 479 and 510, Appendix II.
[256] See Thompson 2009, p. 607; Singer 1993. For further discussion, refer to Golani 1996, p. 45. Cf. a 13th century BCE ring from Tamassos in Cyprus bearing a Luwian inscription: Knapp 2008, pp. 315–316. The relationship of Luwian script to any southern Levantine scripts remains unclear: Maeir *et al.* 2008; Davis 2011.
[257] E.g., Snodgrass 1971, p. 320; Jacobsthal 1956, p. 210; Heurtley and Skeat 1930–1931, p. 35.

Materials: This subtype is made only of silver.

Context: The only example in this dataset comes from a burial context at Hala Sultan Tekke (no. 2220; **Fig. 44:I.d.iv**). One might compare rings from Enkomi Tomb 66,[258] Enkomi Tomb 93,[259] and other objects that are also probably from Enkomi.[260]

4.4.2 Type 2II: Toe Rings

4.4.2.1 Subtype 2II.a: Closed plain (3 units)

Description: This is a much smaller version of Subtype 2I.a.i.

Chronology: This ring dates to Iron Age I.

Materials: Subtype 2II.a is made of copper alloy.

Context: All three examples were discovered *in situ* at Far'ah (nos. 515 and 523; **Fig. 44:II.a**).[261]

4.4.2.2 Subtype 2II.b: Overlapping plain (12 units)

Description: This ring is similar to Subtype 2I.b but it has a much smaller diameter, and can have a flat, plano-convex, or plano-bicone section.

Chronology: This ring dates to Iron Age IIA in Cisjordan, to Submycenaean in the Aegean, and to Late Cypriote II–III in Cyprus.

Materials: Subtype 2II.b is made of copper alloy or gold.

Context: Several examples come from Far'ah and Kerameikos; one of these rings is open-ended rather than overlapping (no. 1553). Two gold examples from Enkomi have one or both terminals splayed and hammered flat; one of these has groups of incised vertical dashes and incised borders, as well as both terminals pierced (no. 2084). The excavator describes another four gold rings from Kouklia as toe-rings although they were not discovered *in situ*;[262] these rings have their terminals flattened, forming a triangular carination with their plano-convex bodies. Tomb 11 at Kalavasos-Ayios Dhimitrios[263] and Tomb 18 at Enkomi[264] also yielded toe rings *in situ*.

[258] Marshall 1911, no. 596:167.
[259] Reg. no. 97 4–1 536.
[260] Marshall 1911, nos. 592–595.
[261] Note also the toe rings found *in situ* at Wadi Fidan: Beherec *et al.* 2014, p. 692.
[262] Catling 1968.
[263] Goring 1996, p. 32.
[264] Gjerstad *et al.* 1934, p. 551.

4.4.3 Type 2III: Finger Rings with Bezel

4.4.3.1 Subtype 2III.b: Stirrup with longitudinal cartouche-shaped bezel (13 units)

Description: Made in one piece, these rings have shanks with plano-convex or circular sections, and they often have flat cartouche-shaped or ovoid bezels that run parallel to the shanks (Keel Type IV.I and II).[265] These bezels have Egyptian hieroglyphs, pseudo-hieroglyphs, or (occasionally) no design at all;[266] common Egyptian motifs include the *wḏjt* eye or uraeus.

Chronology: This ring dates to Late Bronze Age–Iron Age IIA in the southern Levant, to Late Helladic IIIC in the Aegean, and to Late Cypriote I–III in Cyprus. In fact, no solid cartouche-shaped signet rings in Cyprus have been found that date later than Late Cypriote III.[267]

Materials: Subtype 2III.b is made of copper alloy in the southern Levant, and of silver or gold in the Aegean and Cyprus.

Context: One example from Madaba (no. 1169) has a corroded surface with traces of a debased figurative motif with two animals.[268] A ring with undecipherable circles and squares surrounding a central field of straight lines comes from Sahab (no. 1224); although this ring is comparable to another ring from Late Bronze Age ʻAjjul, scholars acknowledge that the design of the Sahab ring is of the debased kind known from other Early Iron Age contexts.[269] Another ring from Taiyiba (no. 760) has what appears to be deep horizontal marks in the manner of cuneiform that do not correspond to any known cuneiform signs.[270] This New Kingdom Egyptian style of ring also occurs in faience at Ekron and Beth Shean.[271] A plain example in silver comes from Perati (no. 1737.028). In Cyprus, rings with ovoid bezels come from Enkomi, Hala Sultan Tekke, and Maroni; some examples demonstrate an Egyptian influence (nos. 1909, 2089, 2188, 2348), while others have Aegeo-Cypriote figurative designs (nos. 1827 and 2131).

Discussion: This stirrup ring is widespread throughout Cyprus,[272] the Levant, and Egypt, from which it possibly originated around the 16th century.[273] Most heavy signet rings served

[265] Keel 1995, p. 113. In the Aegean, ovoid bezels usually run perpendicular to the hoop: Boardman 1970 and Younger 1988.

[266] Note the difference between this terminology and that of Abigail Limmer, who considers a 'bezel' to hold the seal or scarab in much the same way as what is termed a 'mount' does in this document: see Limmer 2007, p. 293.

[267] Boardman 1970, p. 7.

[268] Cf. ʻAjjul, Governor's Tomb: Petrie 1933, pl. 8:2.

[269] Refer to Isserlin 1953, p. 41.

[270] Brent Davis (pers. comm.).

[271] Nos. 1750, 2146a–b from Ekron: Golani 1996, p. 45, fig. 10:3; and for Beth Shean, see James and McGovern 1993, fig. 71:1.

[272] Boardman 1970. E.g., a silver ring (British Museum 97-4-1-617) inscribed with the name of Amenhotep IV from Tomb 93 at Enkomi on Cyprus: Murray *et al.* 1900, pp. 17, 36, pl. 4:617.

[273] Williams 1924, p. 93. Cf. Wilkinson 1971, p. 128, which suggests this subtype's first appearance was the start of the New Kingdom period. A fragmentary gold example (KW 603) recovered from the Late Bronze

an official purpose — for instance, as a symbol of authority or to seal documents.[274] Until the end of the Iron Age I in the southern Levant, this subtype can also have a blank bezel.[275]

Some bezels have specifically southern Levantine iconographic elements engraved on them, such as geometric designs, quadrupeds (ibex or lions), and naturalistic motifs (trees or plants) (no. 1169); other bezels have inscribed Egyptian hieroglyphs (no. 1909). This penchant for Egyptian-style rings was paralleled by the acquisition of other Egyptian or Egyptianising prestige items, including amulets, *ushabti* figurines, and pottery.[276] Finger rings with pseudo-hieroglyphs might at times have script written backwards or upside down, the symbols might be used improperly, be badly composed, or perhaps be badly copied; regardless, these rings would have signified differential status to those who possessed a limited understanding of the symbols depicted. The use of a pseudo-script suggests that it held some altered significance from the original Egyptian scripts that often featured royal hieroglyphic cartouches or the personal names and titles of officials, formulas for good fortune, fertility, or prophylaxis, or the names of deities. Rings with inscriptions also come from Cyprus, where Cypro-Minoan inscriptions may mark the identity of the owner.[277]

4.4.3.2 Subtype 2III.d: Stirrup with a longitudinal swivel bezel (30 units)

Description: This subtype differs from the previous bezel ring in that the bezel is a separate feature that attaches to a shank of circular section. The bezel usually threads onto a wire, which then winds around each terminal of the hoop; this allows the bezel to swivel on its axis. Keel describes three main versions of this ring:[278] (Type I) a ring in which the seal amulet is not penetrated by the metal hoop, (Type II) a ring with a seal amulet penetrated by the metal hoop, and (Type III) a hoop shape that excludes the wearing of the object as a finger ring.

Chronology: This ring dates to Late Bronze Age–Iron Age I in the southern Levant and to Late Cypriote I–III in Cyprus. Subtype 2III.d is common in Phoenician contexts by the Iron Age IIB, and may have spread to Greece during the seventh–sixth centuries BCE via Cyprus.[279]

Materials: This subtype is typically made of gold, but occasionally of copper alloy, silver, or electrum. Swivel rings dated to the Late Bronze Age–Early Iron Age are made of several

Age Uluburun shipwreck illustrates the movement of this subtype across the Mediterranean; the surviving half of the oval bezel contains Egyptian hieroglyphs: Pulak 1988, p. 1, fig. 33.

[274] Wilkinson 2001. Biblical records indicate that the signet ring was a symbol of authority: see Gen. 41:42, Esther 3:10, 3:12; 8:2, 8:8, 8:10.

[275] E.g., Madaba: Harding 1957, fig. 11, pl. 5:220; an unpublished Early Iron Age ring from Taiyiba in Israel (Israel Antiquities Authority 2006-297); another from Ekron, believed to contain an abbreviated title used by Egyptian priests: Golani 2013, p. 135; and an undecorated example from Beth Shean: Golani 2009, Table 11.12:12, photo 11.8b.

[276] See Baker 2006, p. 24, fn. 22.

[277] Ferrara 2012, p. 36; South *et al.* (n.d.); Goring 1989, pp. 100–101. Buchholz and Karageorghis 1973, p. 167, no. 1782; Karageorghis 1974, pp. 44, 61, no. 10, pl. 66; Boardman 1970, p. 7; Masson 1957, pp. 20–22, fig. 15; Megaw 1953, p. 133, pl. 4b; Masson 1957, p. 20. See also Verduci and Davis 2015.

[278] Keel 1995, pp. 105–110.

[279] Cf. Boardman 1967a, p. 5, fn. 7.

different materials (whereas most Middle Bronze Age examples are made entirely from gold). This is true of one from Saham in northern Transjordan with a gold mount, bronze shank, and silver wire attaching the bezel to the shank.[280] The ring's metal mount usually houses a stone or vitreous bezel; in the case of stone bezels, soft stones such as steatite were preferred initially, but harder stones such as rock crystal, carnelian, and agate became increasingly popular in the Late Bronze Age, perhaps modelled after Egyptian prototypes.

Context: This subtype is the most common finger ring in New Kingdom Egypt; it is common in Cisjordan (particularly at Far'ah), and it occasionally appears in Cyprus. One example with Egyptian hieroglyphics from Hala Sultan Tekke dates to the Late Cypriote IIIA (no. 2179).[281]

Discussion: These rings were most likely personal seals that represented authority, and often had a bezel engraved with an inscription or pictorial device (or sometimes left blank). Cypriote statuettes demonstrate that swivel bezel rings could be worn around the neck, in fashions imitated from Egypt.[282] This could also be true for the Levant; for example, a faience ring was associated with faience disc beads in Stratum N-4 at Beth Shean.[283] In fact, there are biblical references to signet rings worn on the hand (Jer. 22:24) *and* around the neck (Gen. 38:18).

In Egypt, royalty handed out these rings as gifts,[284] while outside of Egypt, rings inscribed with illegible script were possibly non-Egyptian or even of Phoenician origin.[285] At Far'ah, stirrup rings occur in 12.2 per cent of high-ranked burials;[286] the inclusion of Egyptian-style prestige objects in the burial program at Far'ah, along with Canaanite cult objects and others of Aegean or Cypriote influence, is argued to express the adoption of non-local material culture by the local population. Braunstein suggests that the percentage of Egyptian-style material at Far'ah declined after Egypt's withdrawal from Canaan, possibly due to an inability to access the material rather than the result of a different set of needs of the local population.[287] Another swivel ring from Ekron with a bezel of Egyptian Blue, dated to the XVIIIth (or possibly XIVth) Dynasty, possibly had an amuletic function; Brandl suggests the ring might have been a gift given to the Canaanite ruler of Ekron during the reign of Amenhotep III.[288]

Swivel rings were a popular funerary offering, but although the mounts often survive in burial contexts, the insets (usually in the shape of small ovoid scarab beetles) are often damaged or missing (**Fig. 44:III.d**). Regardless, these scarabs remain the most frequently occurring form of amulet in Iron Age southern Levantine burials for adults, adolescents,

[280] Fischer 1997, pl. 57.
[281] Myres and Ohnefalsch-Richter 1899, no. 4146; Marshall 1907, p. 4.
[282] Refer to Lagarce 1976. See also Verduci and Davis 2015.
[283] Reg. 387509/1ü) 616.
[284] See the XVIIIth Dynasty relief from Amarna depicting Akhenaten distributing rings to Ay and his wife: Davies 1908, pl. 29.
[285] Boardman 1967a, p. 6; Golani 1996, p. 47.
[286] Braunstein 2011, Table 6.
[287] Braunstein 2011, p. 16.
[288] Brandl 1998b.

and children,[289] for whom they were symbols of protection, rebirth, and renewal.[290] Some examples may have come from Egypt, with others developed from Egyptian prototypes;[291] however, scholars claim that in the Levant most scarabs were locally-made.[292] During the Late Bronze Age and Early Iron Age, these scarabs are often associated with Egyptian, Mycenaean, or Philistine pottery, but by the Iron Age II they tend to occur in association with Phoenician and Cypro-Phoenician wares.[293] Both scarabs and hieroglyphic inscriptions can be useful in determining the *terminus post quem* chronological point for a deposit, as the objects can often be assigned to a specific Pharaonic dynasty, but as they were potent talismans that could be curated over an extended period, they are not particularly useful for providing a *terminus ante quem*.[294] Keel also argues that the engravings on seals and scarabs can be used as a secondary chronological criterion.[295]

4.4.3.3 Subtype 2III.e: Hoop with longitudinal oval/elliptical-shaped bezel (17 units)

Description: The flat ovoid or elliptical bezel of this ring attaches to a hoop of circular cross-section. Usually, this hoop fixes to the bezel, although at times the bezel can swivel. There is a degree of variation in this subtype that includes penannular and closed hoops and plain and decorative bezels.

Chronology: This ring dates to Late Bronze Age–Iron Age IIA in the southern Levant, to Subminoan on Crete, to Submycenaean in Greece, and to Late Cypriote II–III in Cyprus. After the Late Cypriote III, the hoop fixes to the underside of the bezel rather than being able to swivel, a change possibly influenced by Phoenicia.[296]

Materials: This ring is made of most materials, but predominantly of gold.

Context: In the southern Levant, Subtype 2III.e comes from Far'ah (nos. 251–254; **Fig. 44:III.e**), Nasbeh (no. 924), and Sahab (no. 1225); on the Aegean mainland, it comes from Kerameikos (nos. 1530, 1562, 1592); on Crete, it comes from the Knossos North Cemetery (no. 1619); and in Cyprus, it comes from Enkomi (nos. 1908, 1948–1949, 2081, 2132, 2145). Perhaps the most interesting example is a ring with a triangular hoop from Sahab (no. 1225). The bezel on that ring has a central line and an animal (perhaps an ibex) above a human figure on the left side; on the right side the scene depicts two animals — one a horned bovine and the other unknown. This ring was too small to be worn on the finger but was possibly meant to be worn as a pendant.

Discussion: These rings have either Egyptian motifs, or figurative, floral, and geometric designs that reflect a more general eastern Mediterranean influence (although the bezels are

[289] Bloch-Smith 1992, pp. 83–84.
[290] Andrews 1994, pp. 6–7.
[291] On the types of Canaanite scarabs, refer to Tufnell 1984.
[292] Braunstein 1998, p. 201.
[293] Bloch-Smith 1992, p. 84.
[294] Münger 2003.
[295] Keel 1995, pp. 130–132.
[296] Boardman 1970, p. 7.

parallel to the hoop rather than perpendicular to it as is common in the Aegean). In Cyprus around the Late Bronze Age–Iron Age I transition, this ring can also have an inset of stone.[297] One unusual small ring (no. 1562) is similar to Subtype 2III.g shield rings from Kerameikos; the small shank of the ring attaches to a rectangular (rather than ovoid) curved strip of metal with a punctate border on its lateral sides.

4.4.3.4 Subtype 2III.f: Hoop with perpendicular oval-shaped bezel (7 units)

Description: Bezel rings unearthed in the Aegean typically have the bezel set perpendicular to the hoop; these bezels are usually oval, although circular shapes also occur.[298] In many cases, the bezel is made of two pieces of sheet-metal covering another substance (such as lead); the bezel is then attached to the flattened terminals of a hoop rather than cast in one piece, often with the lower face indented to fit the finger. These rings can have bezels engraved with religious scenes, whose purpose was possibly sphragistic (for sealing and stamping).[299] As discussed below, this ring can also incorporate decorative techniques such as *cloisonné* and granulation.

Chronology: This subtype first appears on Crete around 1800 BCE,[300] although in the Aegean, most decorative bezels date to the 14th–12th centuries BCE.[301]

Materials: This ring is made only of gold.

Context: Three gold rings (J6–8) come from Tomb 4 at Sellopoulo — two of them engraved and the other inlaid:[302] J6 has a hoop and bezel decorated in *cloisonné* — a form of enamelling (no. 1739; **Fig. 44:III.f**),[303] J7 has an engraving of a griffin (no. 1740), and J8 has an engraving of an epiphany scene with a man on his knees (no. 1741). Some of the finest examples made of solid gold come from the Shaft Graves of Mycenae[304] and from the Tiryns Treasure.[305] Perati yielded rings with faint markings (nos. 1737.06 and 1737.060), in addition to one with a decayed amber inset that has bevelled sides and is decorated with granulation (no. 1737.100).[306]

Along with the 'Acropolis' ring and another from the Ancient Agora, another example from Perati engraved with two ibexes running through a wooded landscape (no. 1737.003) is one of the few signet rings engraved with a dynamic figurative scene from Attica.[307]

[297] Boardman 1970, p. 7.
[298] See Subtype 2III.h. For a more detailed assessment, refer to Boardman 2001 [1970].
[299] Younger 1984, p. 84.
[300] Higgins 1980a, p. 84.
[301] Higgins 1980a.
[302] Popham and Catling 1974, p. 217, pl. 37.a–b, fig. 14d.
[303] Popham and Catling 1974, fig. 14.h.
[304] Vermeule 1975.
[305] Karo 1930. Late Helladic IIIA–B intaglio rings come from Dendra: Persson 1928, pp. 92–92; Zafer Papoura: Popham and Catling 1974, p. 219; Prosymna: Blegen 1937; Mycenae: Thomas 1938–1939, p. 79; Isopata: *Corpus der Minoischen und Mykenischen Siegel*, Vol. 6; and Sellopoulo: Popham and Catling 1974, fig. 14 d–e.
[306] Cf. Ialysos and Achaia: Iakovides 1980, p. 82.
[307] Papazoglou-Manioudaki 2010, p. 584.

Nonetheless, elsewhere in the Aegean and in Cyprus, Type 2III rings whose purpose was decorative, talismanic, or signatory are often limited to such large gold examples engraved with dynamic scenes.[308]

Discussion: Ring J6 exhibits a high standard of workmanship. Its oval bezel is perpendicular to the hoop and decorated with a tricurved *cloisonné* design that retains traces of inlay; a border of granulation surrounds this design,[309] and curved bars decorate the hoop itself. Ring J7 is a poorly engraved scene of a griffin on a bezel covered in gold leaf that is set on a disintegrated bronze hoop;[310] this scene is comparable to similar scenes on rings from Kalyvia[311] and from Zafer Papoura T.7.[312] Ring J8 has an engraving of an epiphany scene that is very similar to scenes on rings from Vapheio,[313] Isopata T.1,[314] and Kalyvia.[315] Although these rings are small, the position of all three of them near the fingers of the left hand of the deceased indicates their use as finger rings rather than as pendants on bracelets or as necklaces, as proposed for other Late Bronze Age rings.[316] There is no consensus amongst Bronze Age Aegean scholars about the wearing of either engraved rings or small rings on the finger;[317] although rings at both Kerameikos and Lefkandi are often associated with finger bones,[318] mortuary evidence suggests that rings were possibly suspended from bracelets, anklets, or necklaces.[319]

In the Aegean, antecedents for rings decorated with *cloisonné* come from Vapheio,[320] but one of the earliest examples of this technique is the pectoral from the tomb of Tutenkhamun.[321] Rings with *cloisonné* appear from the Late Cypriote IIIA period in Cyprus. The style of Cypriote examples demonstrates a local tradition, such as one from Kouklia Evreti Tomb 8 that is markedly different from Aegean rings in several respects, the main distinction being that Aegean cloisons are not usually set within a background of enamel.[322] One might also associate with this subtype the round bezels with twisted wire frames and vitreous inlays from Enkomi Tombs 66 and 67. *Cloisonné* is rare in the southern Levant, although this technique occurs in Transjordan at Amman (Adoninur) and Meqabelein.[323] In the Aegean, granulated

[308] Dickinson 2006, p. 165; Harding 1984, pp. 141–142, 203. See Kilian-Dirlmeier (1980b) on the local origin for Type 2III rings in Greece.
[309] Pini 1996, p. 211.
[310] Popham and Catling 1974, p. 219, pl. 37.f, fig. 14.e.
[311] Savignoni 1904, p. 522, fig. 12.
[312] Evans 1906, fig. 21.
[313] Tsountas 1889, pl. 10.39; *Corpus der Minoischen und Mykenischen Siegel*, Vol. I, no. 219.
[314] *Corpus der Minoischen und Mykenischen Siegel*, Vol. 6, nos. 269–275.
[315] Savignoni 1904, p. 577, fig. 50.
[316] Savignoni 1904, p. 223. *Contra* Higgins 1980a, p. 84; Boardman 2001 [1970], p. 63.
[317] Popham *et al.* 1980, pp. 211, 381, n. 211; Younger 1977, pp. 149–152; Verduci and Davis 2015. See also Younger and Rehak 2008, p. 159, *contra* scholars who maintain that small rings are suited to slender fingers: Popham and Catling 1974, p. 223, J.8; or children: Pomadère 2012, p. 438; Higgins 1980a, p. 221; Popham *et al.* 1979, pl. 230a–c.
[318] Cf. finger bones with rings at Gezer: Macalister 1905, pp. 32–33; Far'ah: Petrie 1932, p. 11; Har Yona: Alexandre 2003, pp. 186–187; Kfar Yehoshua: Druks 1966, pp. 214–216, 220.
[319] Boardman 2001 [1970], p. 63; Higgins 1980a, p. 84; Younger 1977, pp. 141–159; Younger 1992, p. 276; Younger and Rehak 2008, p. 159. Cf. Cyprus: Lagarce 1976; southern Levant: Reg. 387509/1ü) 616.
[320] Popham 1974, p. 211.
[321] Pini 1996, p. 210.
[322] Goring 1983b, p. 118. Cf. Konstantinidi-Syvridi (2015, p. 150) who argues for an Aegean inspiration.
[323] Refer to Sass 2007, p. 261, although he offers no sources.

rings demonstrate relations between Crete and the mainland in the 12th century BCE, although the nature of those relations remains poorly understood;[324] the taste for granulation and wire decoration appears to end with the Late Helladic IIIC period.[325]

4.4.3.5 Subtype 2III.g: Hoop with perpendicular 'shield' bezel (17 units)

Discussion: This ring with an elliptical or shield bezel is often decorated *en pointillé*, and may have developed from the Bronze Age seal ring. At the centre of some bezels is a hole through which they are fastened to the hoop; in other cases the terminals of the hoop are soldered to the back of the bezel.

Chronology: At Perati, plain versions of these rings date to Late Helladic IIIB–C, and Mountjoy argues that within the Submycenaean cemetery at Kerameikos, some examples of this subtype perhaps also date to Late Helladic IIIC.[326] In Cyprus, a single specimen dates to 1000 BCE.[327]

Materials: This ring is often made of copper alloy, but it is occasionally made of iron, silver, or gold.

Context: Many of the shield rings from Perati have a convex elliptical bezel of gold, silver, or copper alloy. One example of the more characteristically Submycenaean shield ring with a thin sheet-metal bezel comes from Submycenaean Lefkandi (no. 1665).[328] This ring is comparable to nine from the Kerameikos cemetery (nos. 1524, 1529, 1535, 1539, 1574, 1616, 1629, 1665; **Fig. 44:III.g**) whose dates span the chronological range of the tomb groups.[329] Higgins suggests that a gold bezel from the Knossos North Cemetery, formed from elliptical sheet gold with pointed ends and decorated *en pointillé*, is derived only *indirectly* from Minoan and Mycenaean shield rings.[330] Another badly preserved Subminoan (or perhaps Early Protogeometric) shield ring of copper alloy also comes from Knossos.[331] Minoan antecedents made of gold come from Mouliana and Vokastro on Crete.[332]

Discussion: Müller-Karpe argued for an association between the shield rings and certain dress pins and fibulae at Kerameikos.[333] This ring is one of two main subtypes in the Aegean identified as having a northern origin; the other subtype is a ring with S-spiral terminals (Subtype 2III.i).[334]

[324] See Maran 2005, pp. 426–427. Regarding granulated rings as a symbol of authority, refer to Schachermeyr 1984, p. 205.

[325] E.g., examples from Late Helladic IIIC Tiryns: Karo 1930, p. 124, pl. 2.4–5; possibly Late Minoan IIIB Mouliana Vourlia: Xanthoudides 1904, pp. 50–51, fig. 13; and Late Minoan IIIC Praisos Photoula: Platon 1960, pp. 303–305, pl. 244b; Effinger 1996, p. 14.

[326] One example comes from a secure Late Helladic IIIC context at Kalapodi: Mountjoy 1988, p. 23, n. 38.

[327] Gjerstad *et al.* 1934, pl. 105:16 and pl. 105:20.

[328] Catling and Catling 1980, p. 247.

[329] These rings come from Tombs 19E, 27E, 42M, 44, 52M, 60, 70M, 108LA.

[330] Higgins 1996, p. 539.

[331] Catling 1996a, p. 556.

[332] Desborough 1972, p. 304; Snodgrass 1971, pp. 317–320. For more Minoan and Mycenaean rings, see Higgins 1980a, pp. 59, 68–69, 83, and 92.

[333] Müller-Karpe 1962.

[334] For bibliography regarding this subtype and other *Schild-ringer*, refer to Catling and Catling 1980, p. 247.

4.4.3.6 Subtype 2III.h: Hoop with round bezel (8 units)

Description: These rings include examples that have swivel bezels and others that have a hoop soldered to the back of the bezel.

Chronology: In Cyprus, these rings date to Late Cypriote II–III. Round bezels are extremely uncommon in the Aegean, although they occasionally appear during the Late Bronze Age;[335] a single example in the dataset dates to Late Helladic IIIC. Impressions left on Middle Minoan sealings from Phaistos on Crete indicate that round bezels existed in the early part of the second millennium.[336] By contrast, rings with round bezels in the Levant mainly date from late Iron Age II through to the Persian period.[337]

Materials: This subtype is made of gold or silver.

Context: One example in this dataset comes from Perati in the Aegean (no. 1737.037). The remainder of the examples come from Enkomi in Cyprus (nos. 1919, 1922, 2051, 2079–2080, 2086, 2133; **Fig. 44:III.h**). Although not included in this dataset due to its late date in the Iron Age, a silver ring with a round bezel and a decorative ring-and-dot motif comes from Far'ah in Cisjordan.[338]

Discussion: In Cyprus, Enkomi yielded seven rings with decorative round bezels.[339] These bezels consist of a decorative mount edged with block-twisted wire, and occasionally they have granulation ornamentation; in all but one case, these rings have an inlay of vitreous material. This subtype possibly originated in the Aegean given a parallel from the Vapheio Tomb.[340] One ring without an inlay has a bezel decorated with twisted wires in concentric circles that surround an incised spiral set within a circular cloison (no. 2133). Except for ring no. 1919, of which only the bezel remains, all the rings have plain or twisted wire applied to their hoops. The most unusual ring has a hoop formed of two antithetic loops of wire (no. 2086). The majority of these rings display evidence of wear, implying their function as personal possessions rather than as funerary offerings.

4.4.3.7 Subtype 2III.i: Hoop with S-spiral bezel (1 unit)

Description: This subtype has an S-spiral bezel formed from a single wire that terminates in a pair of spirals.

Chronology: In the Aegean, these rings date to Late Helladic IIIC–Submycenaean.

Materials: This ring is made of either copper alloy or gold.

[335] For further discussion, refer to Verduci and Davis 2015. Examples include several round sealings and two silver rings from Charalambos (*Corpus der Minoischen und Mykenischen Siegel*, VS1A 045 and 046) and one small inscribed gold ring from Mavrospilio: Forsdyke 1926–1927, pp. 264–269; Godart and Olivier 1982, pp. 152–153.

[336] Pini 1996, p. 210. Regarding this subtype (at least those with stone bezels) from Middle Minoan II contexts, see Boardman 2001 [1970], p. 384.

[337] Refer to Golani 2013, p. 141.

[338] Tomb 238: Petrie 1930, pl. 42:308.

[339] Lena Åström records the complete list of this subtype from Cyprus: Åström, L. 1972, p. 31, no. 4.

[340] Higgins 1980a, p. 88.

Context: A single example in the dataset comes from Late Helladic IIIC Perati (no. 1737.071), although this subtype also comes from Submycenaean Kerameikos and Lefkandi.[341] This ring demonstrates a northern influence.[342]

4.4.4 Type 2IV: Spirals

4.4.4.1 Subtype 2IV.a: Single Wire Spiral (38 units)

Description: These spirals consist of a coiled piece of wire. The wire most often has a circular section, although in some cases rings recovered *in situ* on finger bones (for example, no. 1582) have flattened wire. The discovery of finger rings made of flattened wire suggests that this was a technique reserved for finger rings rather than hair spirals.

Chronology: These rings date to Late Bronze Age–Iron Age IIA in the Levant, to Late Minoan IIIA, Late Helladic IIIB–C, Submycenaean–Protogeometric, in the Aegean, and to Late Cypriote in Cyprus. Spirals are often the only jewellery recovered at sites that have Mycenaean and Protogeometric contexts.[343]

Materials: This ring is made of either copper alloy or gold.

Context: Spirals formed of coiled wire are common in Cyprus and the Aegean, but are less common in the southern Levant. In this dataset, spirals come from Taiyiba and Far'ah in Cisjordan, from Ekron in Philistia, from Kerameikos, Sellopoulo, and Perati in the Aegean, and from Enkomi and Hala Sultan Tekke in Cyprus. A simple spiral of gold wire (no. 1742) discovered near the deceased's hand within Sellopoulo Burial II indicates that the spiral functioned as a ring rather than as a hair spiral.[344] The largest Mycenaean collection of simple gold rings and spirals actually comes from the Acropolis Treasure of Mycenae.[345] Spiral rings of gold, silver, or bronze also occur from the Iron Age in Cyprus, with many examples coming from Amathus.[346] These spirals appear in Early Dynastic Ur, where the excavators discovered them near the skulls of individuals already wearing earrings, here implying their use as hair ornaments, although the spirals were also in contexts where there were no earrings.[347] Spiral rings are also a frequent feature of the Filigosa-Abealzu culture of Sardinia's Early Chalcolithic period (*ca.* 2700–2500).[348]

[341] Refer to Lemos 2002, p. 116; Desborough 1972, pp. 303–304.

[342] Regarding Momodendri as the chronological and geographical bridge for S-spiral rings from northern Europe, refer to Giannopoulos 2009, pp. 122–125.

[343] E.g., wire rings are the only rings present at Kos: Lemos 2002, p. 116.

[344] Popham and Catling 1974, pl. 37.d, fig. 14.g. Cf. Zafer Papoura T.99: Evans 1906, p. 101, fig. 101:99.b–c; Kalyvia: Savignoni 1904, p. 595, fig. 57; Higgins 1961a, p. 72.

[345] Higgins 1961a, pp. 72–74.

[346] Laffineur 1992, pp. 7–9.

[347] Maxwell-Hyslop 1971, p. 5, pl. 5, fig. 14a. These also come from Vadjalik in the Persian Talish region dated to 2100–1900 BCE: see: Maxwell-Hyslop 1971, p. 20, pl. 15a.

[348] Lo Schiavo 1996, pp. 63–65 and Ugas *et al.* 1989, p. 22. They also occur within Etruscan tombs: refer to Laffineur 1992, p. 60.

Discussion: In the Aegean, wire spirals are principally classified as hair adornments, although they might also have acted as finger rings or earrings;[349] along with handmade household pottery, these spirals are often considered female-gendered grave goods.[350] The small diameter of some spirals makes them unsuitable for finger rings, while the multiple coils on others renders them improbable as earrings despite often appearing in pairs; nonetheless, some authors claim that neither the thickness of the spiral or the number of turns is indicative of the object's function.[351] Scholars argue that wire rings positioned near the hand at Sellopoulo and Zafer Papoura indicate that such coils cannot readily be interpreted as hair ornaments.[352] It may be that these spirals served as raw materials for a goldsmith or as a form of currency; although not all spirals conform to identifiable standard weights, several of them do fall into groups of the same weight.[353]

4.4.4.2 Subtype 2IV.b: Double Wire Spiral (12 units)

Description: In order to create this ring, a doubled-over length of wire of circular section is coiled so that the terminals overlap.[354]

Chronology: Subtype 2IV.b dates to Iron Age I in Philistia, and to Late Helladic IIIC and Submycenaean–Protogeometric in the Aegean.[355] This ring also occurs in Italy from the Late Bronze Age through to the Early Iron Age.[356]

Materials: This ring is made of gold.

Context: In this dataset, double spiral rings come from Ekron in the southern Levant (no. 115), and from Kerameikos (nos. 1482, 1586, 1594–1595, 1599–1601, 1607–1608; **Fig. 44:IV.b**), Marmáriane (no. 1727), and Perati (no. 1737.097) in the Aegean. Spirals with their wire doubled over are particularly common at Kerameikos,[357] at Tiryns,[358] in the Elgin Collection of the British Museum,[359] and in Cyprus at Kouklia.[360] The tradition of spiral wire ornamentation continues in all parts of Italy from the Late Bronze Age through the Iron Age, especially in female burials where hair spirals of double wire (often with undulating terminals) are ubiquitous forms of hair ornament.[361]

[349] Davidson 1952, p. 248; Higgins 1980a, p. 93; Kraiker and Kübler 1939, p. 85.

[350] Strömberg 1993, pp. 41–43. This association between jewellery and female graves increased in the Protogeometric period, although fibulae were included amongst both male and female burials: see pp. 44–46, and 54.

[351] Laffineur 1986, pp. 94–95.

[352] Popham and Catling 1974, pp. 219–220.

[353] Evans 1892–1893, p. 212; Thomas 1938–1939, p. 74; Higgins 1979, p. 66.

[354] Higgins 1969b, pl. 3c. For discussion, see Verduci 2014.

[355] Higgins 1969a, p. 144, pl. 34.d; 1961b, p. 100. Several of this subtype in the Elgin Collection of the British Museum supposedly originated from the Athens neighbourhood: Higgins 1961b, pls. 43.e and 44.a:2–5.

[356] E.g., Bietti Sestieri 1992, p. 388, pl. 40, Type 47a; Bietti Sestieri and Macnamara 2007, pl. 58.273; Pacciarelli 1999a, figs. 27, 30, 32, 33, 34; and 1999b, pp. 137–138, fig. 37, w4, 147, 184, 244, pls. 18, 21; p. 354, pl. 128A:8–9.

[357] E.g., Kübler 1943, p. 32, pl. 39; Tomb 22, M 117; Ruppenstein 2007, Tomb 136, pl. 30:18; Tomb 146, pl. 39:12.

[358] Higgins 1980a, p. 91; Karo 1930, no. 6220, pl. 2.5a, suppl. 32; Kilian 1988, fig. 37.11.

[359] Higgins 1980a, p. 91, pl. 13b; Higgins 1961b, pls. 43.e and 44a:2–5; and 1969b, pl. 34d. For additional bibliography, refer to Lemos 2002, p. 128.

[360] Karageorghis 1983.

[361] Bietti Sestieri and Macnamara 2007, p. 15, Type 1 hair ring.

Discussion: In the Aegean, much of the Submycenaean jewellery is comprised of such wire, which was perhaps included in burials or hoards for its value rather than its function as hair or finger rings.[362] Higgins claimed, 'Spirals of this kind have no place in the Cypriote or Levantine repertoire, and may well be a creation of north-central Greece.'[363] In fact, these rings may have originated in central Europe, where they had a widespread distribution.[364] These double wire spirals possibly then became objects of exchange between Italy and Greece.[365]

4.4.4.3 Subtype 2IV.c: Thick spiral with blunt terminals (7 units)

Description: This subtype is a single-stranded spiral of thick wire used for adorning the hair. The coil of this spiral is often too small to accommodate a finger.

Chronology: This spiral dates to Submycenaean–Protogeometric in the Aegean, and to Late Bronze Age–Iron Age I in Transjordan.

Materials: Subtype 2IV.c is typically made of gold, but in one case is made of lead. Gold examples often have an inner core of a cheaper material, such as bronze.

Context: One spiral comes from Deir 'Ain 'Abata (no. 1154) in Transjordan. The remainder come from Lefkandi (nos. 1657–1658) and Marmáriane (nos. 1723–1726; **Fig. 44:IV.c**) in the Aegean.

4.4.5 Type 2V: Undefinable shapes and fragments

Description: Fragmentary pieces of metal that are identifiably from rings include those that are plain (Subtype 2V.a — 60 units), and those for which there is no information (Subtype 2V.c — 17 units).

4.5 CATEGORY 3: BANGLE TYPOLOGY

This category is subdivided according to the following subtypes: (1) *closed*; (2) *open-ended*; (3) *overlapping*; (4) *decorative*; and (5) *indefinable shapes and fragments*. Further divisions allow for differences in section, terminal shape, and ornamentation. In order to manufacture these bangles, molten metal was poured into a clay or stone mould, whether C-shaped, O-shaped

[362] Dakoronia 2007, p. 62.
[363] Higgins 1980b, p. 220.
[364] Higgins 1980a, p. 91, pl. 13c. E.g., Blajer 1984, pl. 81.C.4–6; Gedl 1983, pls. 51.B.5 and 51.C.3–7; Kuśnierz 1998, pl. 58.A.2–3; Jockenhövel 1971, pl. 80.46; Novotná 1980, pl. 56.C.14, 16, 18; pl. 64.B.2, C.5–6; Novotná 1984, pl. 74.B.3, 5–6, C.7–10, D.14–19; pl. 75.B.6, 10–12, C.2, 10; Prüssing 1982, pl. 25.G.8; Richter 1970, pl. 83.A.9; Říhovský 1972, pl. 34.44.
[365] For additional examples from central Europe, Italy, and the Aegean, refer to Eder and Jung 2005, pp. 488–489.

or rod-shaped,[366] after which the bangle was to some extent annealed and hammered; the tapered ends of some bangles are most likely the result of such hammering. Alternatively, these objects could be made of a block-twisted or strip-twisted strip of metal-sheet. In the database, a bangle's *diameter* is the exterior diameter of the object, its *width* is the width of the bangle measured parallel to the limb, and its *thickness* is the thickness of the bangle measured perpendicular to the limb. Although some of these bangles are flexible enough to have been removable, others are made of thick, inflexible metal and thus would have remained on the body permanently. In most cases, post-depositional disturbance and a lack of associated skeletal material mean that the intended placement of these artefacts on the body is unknown. Unless the function of the object is clear, I do not rely on the excavators' classification but rather refer to the object by the more general term 'bangle.'[367]

4.5.1 Type 3I: Closed

4.5.1.1 Subtype 3I.a: Closed with circular section (8 units)

Description: This closed bangle is manufactured by one of two methods: by casting in an open mould or by curving a rod and soldering its terminals together. This bangle is much less common than those with open terminals, no doubt due to the skill and effort required for casting or soldering.[368]

Chronology: This bangle dates to Iron Age I–IIA and Late Helladic IIIC.

Materials: Subtype 3I.a is made of gold, bronze, or iron.

Context: Type 3I closed bangles are extremely rare; this conceivably reflects technological impediments caused by the greater skill and effort required for casting and soldering techniques. Although uncommon, this subtype occurs within both mortuary and settlement contexts in Cisjordan at Beth Shean (no. 169), 'Eitun (no. 235), Far'ah (nos. 609–610; **Fig. 45:I.a**), and Megiddo (nos. 815–849). A single example comes from Perati in the Aegean (no. 1737.054).

4.5.1.2 Subtype 31.b: Closed with flat section (2 units)

Description: Flat strips of hammered wire can have their terminals brought together and soldered to create a closed shape.

[366] Brody and Friedman 2007. The point at which the metal bent should show strain marks upon analysis, e.g., by X-ray diffraction analysis: p. 102, fn. 8–9.

[367] I apply the following typological divisions: 34–47 mm diameter for an infant, 48–53 mm diameter for a child, 55–65 mm diameter for an adult wrist, 73 mm and greater for an adult arm, and 80 mm and greater for an adult ankle: Ray 2009, p. 242. *Contra* McCown (1947, p. 270) and Åström (1972, p. 491, fn. 1). These divisions circumvent issues that arise at sites such as Nasbeh, where bangles identified as bracelets were heavier and bigger than bangles identified as anklets: Harrison 1947, p. 269. Of the many items of jewellery from Nasbeh, only two bangles were found *in situ*; original photographs of the bangles on the radius and ulna of one deceased individual confirm their use as bracelets: Brody and Friedman 2007.

[368] Laemmel 2003, p. 256. This is similar to Åström's Type III closed bangles: Åström, L. 1972, pp. 491, 563.

Chronology: These bangles date to Iron Age I–IIA in the southern Levant.

Materials: This subtype is made only of copper alloy.

Context: This bangle is extremely rare, and in this dataset occurs only in Cisjordan at Far'ah (no. 686) and at Taiyiba (no. 752; **Fig. 45:I.b**).

4.5.2 Type 3II: Open-ended

4.5.2.1 Subtype 3II.a.i: Open-ended, circular section and blunt terminals (51 units)

Description: Most often, this is a bangle made of a solid rod with blunt or squared terminals; these objects may have functioned as anklets, armlets, or bracelets, and would have been too inflexible for easy removal. In the case of smaller specimens for all subtypes of open-ended bangles (Type 3II), the terminals can overlap (Type 3III), suggesting they might be suitable for children as they can be modified as needed as the child grows.[369]

Chronology: The bangle with two terminals is a common subtype in Cisjordan and dates from at least the Iron Age,[370] although one example from Sa'idiyeh possibly dates to the Late Bronze Age (no. 1382).

Materials: Most frequently, this bangle is made of copper alloy; in one case at Nasbeh, XRD and XRF analysis identified the alloy as leaded tin-bronze.[371] This subtype can also be made of iron, but is rarely made of silver.

Context: This bangle is common throughout Cisjordan, but it appears infrequently in Transjordan, and not at all in Aegean and Cypriote contexts. The excavators call bangles from Qasile 'anklets' due to their size, although they specify no sizes in the publication.[372]

4.5.2.2 Subtype 3II.a.ii: Open-ended, circular section and flattened sides (26 units)

Description: This bangle is similar to Subtype 3II.a.ii, but it has one or both outer sides (that is, the side(s) perpendicular to the body) flattened, and with blunt or tapered terminals. Some examples have overlapping terminals, including one from Nasbeh (no. 2197) and two from Sa'idiyeh (no. 1323).

Chronology: This bangle dates to Iron Age I–IIA.

Materials: All of these bangles are of copper alloy; XRD and XRF analysis identified several examples from Nasbeh as leaded tin-bronze (no. 874).[373]

[369] MacKenzie 1912–1913, p. 59.
[370] Platt 1974.
[371] Friedman *et al.* 2008.
[372] Mazar 1980.
[373] Friedman *et al.* 2008.

Context: This unique version of the penannular bangle occurs only at Taiyiba and Nasbeh in Cisjordan and Sa'idiyeh in Transjordan. All three sites are located in the north of the southern Levant and demonstrate other similarities; for example, all three sites yielded the same type of incised toggle pin (Subtype 3I.b.vi).

Discussion: A study of the bangles from Nasbeh found that they appear to conform to standard weights, and possibly acted as a medium of exchange.[374] Green makes similar observations for the bangles from Sa'idiyeh.[375] The biblical text twice mentions the use of copper or bronze bangles (*kikkar/îm*) or what was the equivalent of a ring-shaped unit of weight — the talent (Exodus 38.29 and 1 Chronicles 29.7). Nevertheless, the identification of a bangle with a unit of weight is problematic due to the great variety of weight systems at any one time, as illustrated by the variety of weights on the Late Bronze Age II Uluburun shipwreck.[376]

4.5.2.3 Subtype 3II.b: Open-ended, circular section and tapered terminals (239 units)

Description: The open-ended bangle with tapered terminals is the most common subtype in Philistia, Cis-, and Transjordan. Typically, this solid subtype has hammered terminals that taper.[377]

Chronology: This subtype dates to Iron Age I–IIA. Two examples from Deir 'Ain 'Abata (nos. 1128 and 1133) come from multi-phase contexts dated to Late Bronze Age–Iron Age IIA (although I would suggest Iron Age IIA for these objects). A single Late Helladic IIIC example comes from the Aegean (no. 1737.081).

Materials: The majority of these bangles are made of copper alloy, including 38 bangles from Madaba, 35 from Sahab, and 37 from Far'ah. Nonetheless, significant numbers are made of iron, such as 56 examples from Far'ah. The simplicity of manufacture (involving curving a metal rod) might explain the popularity of this subtype at Far'ah.[378] In the past, scholars have proposed that this form is made of iron more frequently in the IA II;[379] however, my analysis indicates that most Iron Age I iron objects in the Levant are bangles of this subtype.[380]

[374] Friedman *et al.* 2008.

[375] Green 2007, pp. 295–296. Several authors note that bronze bangles seem to conform to standard weights in Europe, Africa, Latin America, and the Near East: Bisson 2000, p. 114; Fisher 1984; Herbert 1984; Hosler *et al.* 1990; Lassen 2000, pp. 241–243; Pare 2000, p. 28; Ruiz-Gálvez 2000, pp. 270–271.

[376] Pulak 2000, pp. 262–264. During the Iron Age II, this situation was complicated in Judah by the adjustment to an Egyptian standard from local systems: Kletter 1998, pp. 119–122. On the value of metal items, see Bisson 2000, pp. 110–114 and Pare 2000.

[377] This is similar to Åström Type I with open ends, which has Late Bronze Age parallels at Gaza: Petrie 1932, pl. 2; Megiddo: Loud 1948, pl. 226:3; and Gezer: Macalister 1912a, p. 99, fig. 286.

[378] Laemmel 2003, p. 256.

[379] Golani 1996, p. 54, no. 3716, fig. 12:2. Cf. Tufnell 1953, pls. 54:61 and 55:9–10; Lamon and Shipton 1939, 86:6, 10.

[380] Cf. Waldbaum 1978, pp. 24–27.

Context: This subtype is exceedingly common in Philistia, Cis-, and Transjordan, but only one example in this dataset comes from an Aegean context at Perati (no. 1737.081) and from a Cypriote context at Enkomi (no. 2162). It is possible that objects formerly identified as bangles in Cyprus are in fact copper ingots.[381] The majority of these bangles are burial offerings, but one iron example from Qasile (no. 128) was possibly a temple gift.[382]

Discussion: The identification of this bangle at Far'ah in 12th century BCE Philistine tombs might connect it to the appearance of the *Sea Peoples*. Mazar notes that a similar bangle in a Mycenaean IIIC tomb at Ialissos supports this suggestion.[383]

4.5.2.4 Subtype 3II.c: Open-ended, plano-convex section and tapered terminals (19 units)

Description: This solid subtype has a flat surface resting against the body and a rounded outer edge, forming a D-shaped cross-section.

Chronology: This subtype dates mainly to Iron Age I–IIA.

Materials: This bangle is made of copper alloy.

Context: Several examples come from Far'ah[384] and Taiyiba in Cisjordan, and one example comes from Sahab (no. 1270) in Transjordan. The published report describes the latter bangle as decoratively ribbed, but the object retains no evidence of any such decoration.[385] This subtype is not present in Aegean and Cypriote contexts.

4.5.2.5 Subtype 3II.d: Open-ended, elliptical section and tapered terminals (16 units)

Description: This bangle is formed from either a rod or hollow wire, as is evident in the cross-section of fragmentary pieces (see no. 28). When hammered along its length, the wire has an ovoid section.

Chronology: This bangle mainly dates to Iron Age I–IIA, although at Sahab it occurs within a multi-phase context dated to Late Bronze Age–Iron Age IIA.

Materials: This subtype is made of copper alloy or iron, and includes early Iron Age I examples of iron from Far'ah (nos. 331, 345, 493, and 603) and from Cave A4 in the Baq'ah Valley (nos. 1006 and 1008).

Context: Subtype 3II.d occurs within burials at Far'ah and Nasbeh in Cisjordan, and at the Baq'ah Valley and Sahab in Transjordan. Once again, this subtype is absent in Aegean and Cypriote contexts.

[381] Knapp 2008, p. 118.
[382] Mazar 1985a, p. 9.
[383] Mazar 1985a. Regarding Ialissos, see Snodgrass 1971, p. 221, n. 11 and n. 229.
[384] One of the best preserved is reg. 800/S6: refer to Snodgrass 1971, p. 256, pl. 212. See also the bangle collection from Tomb 832: pl. 228.
[385] Dajani 1970, p. 34.

4.5.2.6 Subtype 3II.f: Open-ended plain, lentoid section and tapered terminals (12 units)

Description: Like Subtype 3II.d, this bangle is formed from a rod or hollow wire (see again no. 28), but when hammered on either side, the wire has a lentoid or almond-shaped section. Many examples are irregularly-shaped, with terminals of different thickness.

Chronology: This subtype dates to Late Bronze Age–Iron Age IIA, often as the result of being found in multi-phase contexts such as Tomb C at Sahab.[386]

Materials: This bangle is made of copper alloy.

Context: Subtype 3II.f comes only from Sahab and Deir ʻAin ʻAbata in Transjordan.

4.5.2.7 Subtype 3II.h: Open-ended plain, circular section and wide, blunt terminals (4 units)

Description: This extremely rare bangle has a circular section with terminals that flare out.

Chronology: This bangle dates to Iron Age I–IIA Philistia, to Iron Age I Cisjordan, and to Late Cypriote II–III Cyprus.

Materials: This subtype is typically made of copper alloy or silver.

Context: Subtype 3II.h comes from Azor (no. 10; **Fig. 46:II.h**)[387] and Gath (no. 31),[388] and with decorative terminals comes from Enkomi (nos. 1923–1924).

Discussion: This subtype, sometimes described as an earring, first occurs in silver pairs in the Neolithic cave of Alepotrypa, Laconia in the Peloponnese — the site of some of the earliest known silver jewellery in Europe.[389] The flared terminal continues to occur in the Aegean into the Bronze Age, as indicated by a spiralling silver bangle with conical terminals from Lefkada in the Ionian Islands.[390]

4.5.2.8 Subtype 3II.i: Open-ended, flat section and blunt terminals (1 unit)

Description: This bangle is also rare, and formed from a flat piece of metal with squared off terminals that do not meet.

Chronology: This subtype only dates to Iron Age IIA.

Materials: This bangle is of an unidentified metal.

Context: The dataset includes only one of these bangles; it comes from Tomb 212 at Farʻah (no. 645; **Fig. 46:II.i**).

[386] Dajani 1970.
[387] Pit burial D58: Ben-Shlomo 2008, fig. 21.5.
[388] Verduci forthcoming A.
[389] Dimakopoulou 1998, fig. 66.
[390] Ministry of Culture 1997, p. 34, no. 16.

4.5.2.9 Subtype 3II.j: Open-ended, lozenge section and tapered terminals (4 units)

Description: This bangle has a lozenge or diamond-shaped section with hammered terminals that taper.

Chronology: This subtype appears in Late Bronze Age–Iron Age IIA contexts.

Materials: This bangle is made of copper alloy.

Context: Subtype 3II.j appears only in multi-phase Tomb C at Sahab.[391] One example has parallel circumferential grooves (no. 1266; **Fig. 46:II.j**), while another, described in the published report as having a decorative surface (no. 1268), retains no evidence of any decoration.[392]

4.5.3 Type 3III: Overlapping

4.5.3.1 Subtype 3III.a: Overlapping, circular section and blunt terminals (19 units)

Description: This solid rod has blunt but offset terminals. As the terminals overlap, the bangle could be enlarged as necessary,[393] although the sturdiness of the rod (with thicknesses varying from 4–6.5 mm) also means it would be difficult to remove and would most likely stay in place until outgrown. Different aperture sizes are most likely associated with phases of development and the stage these objects were *grown into* or *out of* during the transition from infancy to adulthood.[394]

Chronology: This bangle dates to Iron Age I–IIA.

Materials: Subtype 3III.a is made of copper alloy or iron. One example of iron comes from an early Iron Age I context at Madaba (no. 1196).

Context: This bangle occurs in burial contexts at Nasbeh in Cisjordan, and at several sites in Transjordan, once again reflecting links between the adornment practices of Nasbeh and Transjordan.

4.5.3.2 Subtype 3III.b: Overlapping, circular section and tapered terminals (52 units)

Description: This bangle is similar to Subtype 3III.a, but its hammered terminals appear tapered or slightly rounded.[395]

Chronology: This bangle appears in Late Bronze Age–Iron Age IIA contexts. Examples from Iron Age I levels come from Far'ah (no. 552) and Sahab Tomb 1 (no. 1213).

[391] Dajani 1970.
[392] Dajani 1970, p. 34.
[393] MacKenzie 1912–1913, p. 59.
[394] Green 2007, p. 283.
[395] This is similar to Åström Type II with overlapping ends coiled around its opposite end, which occurs in Late Cypriote II contexts: Åström, L. 1972, p. 491.

Materials: This subtype is made of copper alloy or iron.

Context: Subtype 3III.b is a common in Cis- and Transjordan, and appears in Philistia at Azor (no. 12) and Gath (nos. 44 and 77).

4.5.3.3 Subtype 3III.c: Overlapping, plano-convex section and tapered terminals (7 units)

Description: This is a bangle formed using a rod with one flattened or slightly convex side resting against the body. The bangle's curved outer side means that the bangle has a D-shaped cross-section. The hammered terminals are rounded or taper to points.

Chronology: This subtype dates to Late Bronze Age–Iron Age IIA.

Materials: Usually, this bangle is made of copper alloy, although one example from Cave A4 in the Baq'ah Valley is of steel (no. 1009).[396]

Context: In Cisjordan, Subtype 3III.c comes from Far'ah (nos. 550–551) and Taiyiba (nos. 754 and 761; **Fig. 46:III.c**), and in Transjordan, it comes from the Baq'ah Valley (no. 1009) and Sa'idiyeh (no. 1323).

4.5.3.4 Subtype 3III.d: Overlapping, elliptical section and tapered terminals (14 units)

Description: This bangle is constructed from a rod or (often hollow) wire, as can be seen in the cross-section of fragmentary pieces (see no. 28). When hammered along its length, this wire has an ovoid section with tapered terminals.

Chronology: This bangle appears in Late Bronze Age–Iron Age IIA contexts, although most appear in Iron Age I contexts.

Materials: Subtype 3III.d is made of copper alloy, iron, and in one case, steel (no. 1011).

Context: This subtype comes from burial contexts in Cisjordan at 'Eitun, Far'ah, and Nasbeh, and in Transjordan at the Baq'ah Valley and Sahab.

4.5.3.5 Subtype 3III.e: Overlapping, lentoid section and tapered terminals (9 units)

Description: This bangle is similar to Subtype 3III.d, but its hammered sides create a lentoid or almond-shaped section.

Chronology: Subtype 3III.e dates to Late Bronze Age–Iron Age IIA in the southern Levant.

Materials: This bangle is made only of copper alloy.

Context: This subtype is limited to Far'ah in Cisjordan (no. 601), and to Sahab in Transjordan (nos. 1211, 1231, 1240, 1254, 1271, 1309–1310, 1312; **Fig. 46:III.e**).

[396] McGovern 1986, fig. 84.13, pl. 31c.

4.5.3.6 Subtype 3III.f: Overlapping with flat section (2 units)

Description: This rare bangle is like Subtype 3II.i, but its blunt terminals overlap as though allowing room for growth.

Chronology: This bangle dates to Iron Age I–IIA in the southern Levant.

Materials: Subtype 3III.f is made of copper alloy.

Context: This subtype is limited to Nasbeh (nos. 878 and 980; **Fig. 47:III.f**).

4.5.3.7 Subtype 3III.g: Overlapping with lozenge section (5 units)

Description: This solid bangle has a lozenge or diamond-shaped section with hammered terminals that taper.

Chronology: This bangle dates to Late Bronze Age–Iron Age IIA.

Materials: Subtype 3III.g is made only of copper alloy.

Context: This bangle comes from the Baq'ah Valley (nos. 1004 and 1114) and Sahab (nos. 1256, 1272, and 1314; **Fig. 47:III.g**) in Transjordan. Excavators recovered a similar open-ended version (Subtype 3II.j) from Sahab.

Discussion: Plain bangles with a lozenge section are comparable to their decorated counterparts, which share central European traditions (see Subtype 3IV.c).

4.5.4 Type 3IV: Decorative

4.5.4.1 Subtype 3IV.a: Twisted (4 units)

Description: This bangle is a rare subtype formed by twisting a fine metal rod of either circular or square section.

Chronology: Subtype 3IV.a dates to Iron Age I–IIA in Philistia, to Late Helladic IIIB–C in the Aegean, and to Late Cypriote II–III in Cyprus.

Materials: This subtype is made of either copper or silver.

Context: A fragmentary piece of twisted wire comes from Gath (no. 65) and a unique specimen in silver comes from Maroni (no. 2358; **Fig. 47:IV.a**). The latter object has tapered terminals that overlap at the top and that twist around the hoop in spirals. Between these spirals is a rectangular piece of gold.[397] Two similar examples come from Perati (nos. 1737.093 and 1737.098), where the twisted terminals overlap around their opposing side and can slide so that the bangle is adjustable.

[397] Marshall 1911, p. 480; Johnson 1980, no. 80; Åström, L. 1972, p. 502.

4.5.4.2 Subtype 3IV.b: Open-ended with circular, elliptical or plano-convex section and decorative surface (6 units)

Description: These solid bangles have various cross-sections, and decoratively incised geometric or *en pointillé* designs.

Chronology: This subtype appears in Late Bronze Age–Iron Age IIA contexts.

Materials: This bangle is made only of copper alloy.

Context: Subtype 3IV.b occurs in Cisjordan at Azor, ʻEitun, and Taiyiba, and occurs in Transjordan at Sahab. Two bangles from Sahab have a chevron design along both outer edges (nos. 1300 and 1320). Another bangle from Azor has a plano-convex section and short engraved lines along either side of the outer curve of the bangle (no. 13). Two bangles from ʻEitun have decorative wavy and straight punctate lines (nos. 232–233; **Fig. 47:IV.b**),[398] and two from Taiyiba have decorative punctate lines (nos. 747–748). Several other Iron Age I–IIA examples of overlapping bronze bangles with wavy punctate lines come from Khirbet Nisya,[399] Har Yona,[400] and Gibeon.[401]

Discussion: The absence of Philistine pottery at sites where this subtype is found, such as Har Yona, argues against associating this subtype with the *Sea Peoples*.[402] At that site, archaeologists discovered the bangles *in situ* on arm bones, indicating their use as bracelets or armlets;[403] these bangles also appear on the upper arms of figurines dated to both the Late Bronze Age and Iron Age IIA.[404]

4.5.4.3 Subtype 3IV.c: Open-ended with lozenge or rectangular section and decorative surface (6 units)

Description: This subtype has a rectangular or diamond cross-section with tapered terminals, and decoratively incised geometric or *en pointillé* designs.

Chronology: This bangle dates to Iron Age I.

Materials: Most commonly, these bangles are made of copper alloy, although one from Beth Shean is of silver (no. 134). In that example, the object was amongst a hoard of *Hacksilber*,

[398] In 1959, The Jordan Department of Antiquities excavated a bronze bracelet (excavation no. 122, Jordan no. J8354, and Jordan University no. 568) at Qweibeh, a Roman Decapolis site north of Jordan. This object is now held at the University of Jordan Archaeological Museum. The bracelet, broken in two pieces, has an undulating punctate line along its circumference and some incised lines at each terminal. The similarity of this bangle to Early Iron Age bangles from Israel might suggest that the one from Qweibeh was a curated piece.

[399] Tomb 65: Livingstone 2002, fig. 6. Comparisons between metals from this multiple cave burial and the Baqʻah Valley led the excavators to conclude that active trade existed between the hill country of Judea and the Transjordan: p. 29.

[400] Alexandre 2003, p. 188, fig. 3.3. Apparently, this was a decorative technique used on bangles at Megiddo: Loud 1948, pl. 226.4–6 and 226.8.

[401] Pritchard 1962, p. 115, fig. 75; Waldbaum 1989, pp. 114–115, fig. 2.

[402] Alexandre 2003, p. 188, fig. 3.3.

[403] Alexandre 2003, p. 186. Alexandre also notes comparable bangles from Baqʻah Valley, although no evidence for decorative bangles is provided in the published material, cf. McGovern 1986, pl. 32.a–d.

[404] Deir ʻAlla: Franken 1960, pl. 13a; Farʻah (North): Chambon 1984, pls. 63:4 and 84.

with lead isotope analysis indicating Anatolian and Aegean origins for the silver.[405] Atomic absorption analysis of another bangle from ʻEitun (no. 227; **Fig. 47:IV.c**) indicated it was of a low tin (9 per cent) bronze.[406]

Context: In addition to the bangles mentioned above, another four examples derive from ʻEitun (nos. 212, 228, and 232). One might compare this subtype to Subtype 3IV.b bangles from Azor and ʻEitun, or to Subtype 3III.g undecorated bangles with a lozenge section from the Baqʻah Valley and Sahab.

Discussion: These bangles were a prime factor in a possible *Sea Peoples* identification for the deceased in Tomb C1 at ʻEitun.[407] They are comparable to 13th–10th century BCE examples from central Europe, in particular to bangles from Germany, Hungary, Yugoslavia, Romania, and Transylvania.[408] In fact, the bangle from Transylvania was also found with a flange-hilted sword, which may be a feature associated with the movement of peoples from central and northern Europe to the Mediterranean at the end of the Late Bronze Age.[409] While some of the European bangles share similarities with those from Philistia, one must distinguish between those with a tapered terminal familiar in the Levant, and those with a blunt terminal that are more common in Europe.[410]

A similar pattern to that on the bangle from ʻEitun (no. 227) appears in the Medinet Habu reliefs on an armlet worn by Ramses III,[411] and similar armlets — perhaps representing military rank — appear in the Medinet Habu depictions of *Sea People*.[412] Located in the vicinity of Tomb C1 at ʻEitun were also fragments of two wide decorated copper alloy belts that possibly reflect practices associated with warrior burials.[413] The presence of incised markings on items of personal adornment, along with those on bronze weapons and vessels in the Early Iron Age, may indicate *ritual killing* or symbolic destruction in funerary rituals;[414] these markings on objects are viewed by some authors as the result of an Aegean or Anatolian influence, although local examples exist.[415]

4.5.4.4 Subtype 3IV.e: Open-ended or overlapping with decorative finials (3 units)

Description: The terminals on these solid and penannular bangles often depict animal heads or somewhat resemble animals.

[405] Thompson 2009, p. 597.
[406] Edelstein and Aurant 1991, figs. 7 top left and 12.10.
[407] Edelstein and Aurant 1991, p. 29.
[408] E.g., those from Băleni illustrated in Petrescu-Dîmboviţa (1978, pls. 54–55). For examples from southwest Germany (e.g., those from Nieder-Flörsheim), see also Richter 1970, pls. 36 and 84.1–6.
[409] Edelstein and Aurant 1991, p. 29.
[410] E.g., those from Romania: Petrescu-Dîmboviţa and Florescu 1971, R35b.19.
[411] Nelson 1930, pl. 24.
[412] Nelson 1930, pls. 24–25.
[413] Edelstein and Schreiber 2000.
[414] Verduci forthcoming B; Green 2006, p. 196, fn. 96.
[415] Regarding Aegean, Cypriote, Levantine, and Central Anatolian parallels, see Green 2006, pp. 239–240. Cf. Negbi (1998, pp. 195–196) who argues for a Hittite origin of the practice.

Chronology: Although many examples date to the Roman and Hellenistic periods, some date to as early as Iron Age I–IIA in the southern Levant.

Materials: These bangles are all made of copper alloy.

Context: In this dataset, all examples of this subtype come from Far'ah. One has rounded and ridged edges on the terminals (no. 549; **Fig. 47:IV.e**); another has snakehead terminals (no. 577); and in a third, the inspiration is unclear as it simply has jagged crenelated terminals (no. 719). Kalavasos-Ayios Dhimitrios Tomb 11 in Cyprus yielded a pair of heavy gold bracelets with decorative terminals; these are compared by Goring to a pair in silver from Enkomi and 10 in gold from 'Ajjul.[416] Bangle fragments with decorated terminals from Beth Shean are also reminiscent of Late Bronze Age bangles from 'Ajjul[417] and from Basta.[418] There is also a silver object from the Nuragic site of Su Mulinu in Sardinia with a probable *ante quem* of the eighth century BCE.[419] Another example from Samaria that dates to the Iron Age has snakehead terminals.[420]

4.5.4.5 Subtype 3IV.f: Closed flat band with bossed ridges (2 units)

Description: These bangles consist of two layers of sheet-metal with their terminals hammered closed; the seam remains visible. The decorative outer layer of the bangle has circumferentially-bossed ridges and is held in place with the overlapping edges of the inner layer.

Chronology: This bangle dates to Late Cypriote III.

Materials: Subtype 3IV.f is made of gold.

Context: Two of these bangles come from Kouklia-*Evreti* Tomb 8 (nos. 2262–2263; **Fig. 47:IV.f**).

Discussion: Neither of these objects demonstrates any evidence of wear; this may suggest that the bangles had a funerary function. The status of the deceased was undoubtedly significant given the other luxurious objects within the tomb and the deceased's ability to dispose of so many gold artefacts,[421] some of which are of substantial size and weight; for example, each bangle weighs approximately 50 g.

4.5.5 Type 3V: Spirals (3 units)

Description: Spiral or ribbon bangles encircle the arm in a coiled fashion. These bangles are formed of a flat band of metal.

[416] Goring 1996.
[417] Thompson 2003.
[418] Lilyquist 2012, fig. 28.
[419] This piece stored at the Villanovafranca Museum is comparable to a piece of *Hacksilber*: see Thompson 2007, p. 63.
[420] Crowfoot *et al.* 1957, pp. 446–447, fig. 106:2.
[421] Catling 1968b.

Chronology: These bangles appear in Protogeometric contexts.

Materials: This subtype is made only of copper alloy.

Context: In this dataset, this bangle is limited to Marmáriane.[422] Two of these bangles have *tremolierstich* or *tremolo* motifs (nos. 1715 and 1722; **Fig. 47:V**) that are comparable to the earliest Middle Protogeometric bangle from Lefkandi (P 14.5), which is a flat band with overlapping terminals decorated along its length with a *tremolo* zig-zag line.[423] *Tremolo* is a motif also used on similar ribbon bangles across Italy.[424]

Discussion: Heurtley and Skeat claimed a northern origin for the *tremolo* motif, although there is no consensus given the early date of the Lefkandi example.[425] The fact that the motif commonly appears on Late Macedonian Bronze Age matt-painted pottery is (perhaps) indicative of the direction from which the motif entered Greece. This motif is frequently associated with jewellery from the northern regions of Greece and central Europe, where the motif appears on finger rings (see Subtype 2I.d.ii).[426]

4.5.6 Type 3VI: Undefinable Shapes and Fragments

Description: Fragmentary pieces of metal that are identifiably bangles include those that are plain (Subtype 3VI.a — 104 units), those that are decorated (Subtype 3VI.b — 1 unit), and those for which there is no information (Subtype 3VI.c — 64 units).

Discussion: The majority of these bangles do not lend themselves to interpretation, although at Azor, one Subtype 3VI.a bangle made of iron (no. 15) is one of the earliest examples of iron jewellery from the region, and was associated with an Egyptian scarab positioned at the neck of the deceased.[427] There is only one example of Subtype 3VI.b, which comes from Cave A4 in the Baq'ah Valley, and possibly has a decorative central groove and bosses.[428]

4.6 CATEGORY 4: PENDANT TYPOLOGY

Pendants have perforations at one end for suspension and typically hang from a string around the neck, often with beads to form necklace strands;[429] pendants are also components of bracelets, girdles, and earrings. This category is organised under the following subheadings: (1) *Egyptian deities*; (2) *fauna*; (3) *flora*; (4) *geometric shapes*; (5) *replicas of manufactured objects*; and (6) *other*, being shapes that do not fit into the other subdivisions. In the database, a

[422] Heurtley and Skeat 1930–1931, fig. 14:9–10.
[423] Catling and Catling 1980, p. 246.
[424] Bietti Sestieri Type 12c: Bietti Sestieri and Macnamara 2007, p. 20.
[425] Heurtley and Skeat 1930–1931, p. 30. Cf. Higgins 1980b, p. 246.
[426] Snodgrass 1971, p. 320; Jacobsthal 1956, p. 210; Heurtley and Skeat 1930–1931, p. 35.
[427] Dothan 1961, p. 172.
[428] McGovern 1986, p. 53.
[429] See, e.g., Loud 1948, pl. 218:35.

pendant's *height* and *width* are its maximum height and width when suspended, and its *thickness* is its maximum thickness measured perpendicular to the surface of the chest. Most pendant subtypes incorporate sheet-metal, but the wide array of forms required a wide range of manufacturing and decorative techniques that included moulding, casting, incising details, and embossing or stamping motifs.[430]

4.6.1 Type 4I: Egyptian Deities

4.6.1.1 Subtype 4I.a: Taweret (2 units)

Description: *Taweret* is an Egyptian goddess who protects fertility and childbirth (McGovern Type I.F.1). This pendant is composed of two halves of sheet-metal and depicts a female hippopotamus with a large belly, pendulous breasts, and a crocodile tail. The moulded front layer of the pendant folds over the flat back layer, and originally had a suspension hoop soldered to it.

Chronology: These pendants date to Late Cypriote IIIA.

Materials: This subtype is made of gold.

Context: Two examples (nos. 2183 and 2186; **Fig. 48:I.a**) come from Hala Sultan Tekke in Cyprus.[431] Although *Taweret* appears elsewhere on Cyprus, the similarity of these pendants to others from Egypt suggests that these were Egyptian imports.[432]

Discussion: Most often, women and children would have worn this pendant during life, but the pendant also occurs in mortuary contexts.[433]

4.6.2 Type 4II: Fauna

4.6.2.1 Subtype 4II.a: Fly (14 units)

Description: These *repoussé* pendants are composed of two halves of sheet-metal with a ribbed decoration across the head and neck, and are pierced at either side of the head for suspension (McGovern Type III.C).

Chronology: This subtype dates to Late Cypriote II–III in Cyprus, but it originates in Egypt, where it was popular throughout the Middle and New Kingdoms when it was awarded as a symbol of status, although it appears in Late Bronze Age contexts in the southern Levant.[434]

[430] Embossed motifs were produced by pressing the metal into a negative mould, or motifs were stamped from the rear side of the sheet to produce a positive image: Ogden 1982, pp. 36–39.

[431] Jacobsson 1994, p. 58, pl. 33:315.

[432] Samaes and Nys 2010.

[433] Andrews 1990, p. 173. For further discussion on the *Taweret* figure in Cypriote contexts, refer to Samaes and Nys 2010.

[434] Aldred 1971, pl. 41; McGovern 1985, p. 34; Petrie 1934, pls. 7 and 11.

Materials: Subtype 4II.a is made only of gold.

Context: Fourteen of these pendants come from Tomb 19 at Enkomi (no. 1917; **Fig. 48:II.a**). Similar examples that date to the Late Bronze Age I come from Hoard 1313 at 'Ajjul.[435]

4.6.3 Type 4III: Flora

4.6.3.1 Subtype 4III.a: Pomegranate (7 units)

Description: This subtype is a hollow pendant composed of two hemispheres of sheet-metal. Often the pendant has a crenellated tube inserted at one end, representing the fruit's hard tubular calyx.

Chronology: In the Levant, pomegranate pendants date to Late Bronze Age–Iron Age I. Within Cyprus, plain examples date to Late Cypriote II–III, and those decorated with granulation date to Late Cypriote II.[436] In the Aegean, gold pomegranates occur in Shaft Grave III at Mycenae in association with Late Helladic IIIB pottery.[437]

Materials: All examples are of gold.

Context: The pomegranate pendant occurs in burials and settlements throughout the eastern Mediterranean. In this dataset, it comes from Ashdod (no. 1; **Fig. 48:III.a**), from Ekron (no. 93), and from Megiddo in Stratum VIIA (no. 773) and an Early Iron Age tomb (no. 838).[438] The most ornate specimen — from Enkomi (no. 2136) — has a decorative pattern of fine granulated triangles.

Discussion: Pomegranate motifs occur throughout the Mediterranean in various forms and materials. That these pendants were elements in necklaces is evident from their depiction on a terracotta figurine from Asine that displays two necklaces, one of which has a pendant resembling a pomegranate.[439] The pomegranate has an association with fertility and death that might be due to the abundant seeds and the red colour of the fruit,[440] and is a component of both Canaanite and Israelite ritual.[441] Scholars claim that the pomegranate motif (particularly in the case of ceramic vessels found at Ashdod, Ekron, Gath, Qasile, and Sera') is also associated with Philistine cult during the Iron Age I–IIA;[442] a painted clay model of a full-sized pomegranate comes from a cultic corner in Iron Age IIA levels at Gath, where it and other ritual objects were perforated as though intended to be suspended from some form of frame.[443] In the Aegean, scholars link the pomegranate to status and prestige,

[435] Petrie 1934, pls. 7 and 11.
[436] Åström, L. 1972, p. 577.
[437] Karo 1930–1933, pl. 22:77.
[438] Loud 1948, pls. 215:113 and 224:28; Guy 1938, pl. 166:9.
[439] Frodin and Persson 1938, p. 309, no. 5, fig. 212:4.
[440] For references, see Ward 2003.
[441] Dothan, T. and Ben-Shlomo 2007, pp. 13–14.
[442] Dothan, T. and Ben-Shlomo 2007.
[443] Maeir 2012, pp. 37–38, fig. 1:24.

and the recovery of thousands of pomegranate seeds and fruit fragments amongst the luxury goods in the Uluburun shipwreck reflects the pomegranate's role as an exotic item that played a part in elite consumption practices.[444]

4.6.3.2 Subtype 4III.b: Leaf (2 units)

Description: This leaf-shaped pendant is made of sheet-metal with lightly incised feather-nerved veins (McGovern Type IV.H.3.b).[445] The tapered upper tang of the leaf coils to create a cylindrical suspension hoop. This subtype is similar in shape to piriform Subtype 4IV.f.

Chronology: In this dataset, these pendants date to Iron Age I in the southern Levant and to Late Cypriote IIIA in Cyprus. This subtype is also popular in Late Bronze Age contexts, where it occurs in various materials throughout Egypt and the Levant.[446]

Materials: This subtype is made only of gold.

Context: Subtype 4III.b comes from Philistine Stratum VIIB at Ekron (no. 97) and from a jewellery hoard at Hala Sultan Tekke in Cyprus (no. 2178; **Fig. 48:III.b**).

4.6.3.3 Subtype 4III.c: Palmette (1 unit)

Description: This pendant is composed of two halves of sheet-metal, and decorated with a volute palmette in *repoussé*; Feldman describes this pattern as being part of the international *koiné*.[447]

Chronology: In Cyprus, this pendant dates to Late Cypriote II–III. Various palmette designs also appear in the Levant during the Late Bronze Age.[448]

Materials: This pendant is made of gold.

Context: The single specimen in this dataset comes from Hala Sultan Tekke in Cyprus (no. 2197; **Fig. 48:III.c**).

4.6.4 Type 4IV: Geometric Shapes

4.6.4.1 Subtype 4IV.a: Crescent (15 units)

Description: There are several versions of this popular pendant, but it is typically a composite item requiring several components and manufacturing techniques: sheet-metal, casting, hammering, soldering, and sometimes decorative incising. Most crescents are soldered

[444] Ward 2003, p. 530.
[445] 'Feather-nerved veins' is a botanical term referring to the lines that radiate diagonally from the midriff like the barbs of a feather.
[446] See McGovern 1985, pp. 50–52.
[447] Feldman 2006b, p. 34.
[448] McGovern 1985, p. 47.

to a suspension cylinder, so that the points of the crescent hang downwards (McGovern Type VI.B.1–2);[449] these points may point straight down, turn in, or even abut. Some scholars compare these pendants to the crescent moon or to bull's horns. In certain cases, a simple version is made of flat sheet-metal with perforations for suspension (for example, nos. 786, 787, and 2175d).

Chronology: This subtype has a long history in the Levant and Egypt from *ca*. 2000 BCE onwards.[450] In the Late Bronze Age to Early Iron Age transition, the crescent often has incised dots and cross-hatchings and the suspension cylinder becomes higher with defined ribbing. In the Aegean, examples occasionally occur in Late Helladic IIIB–C, and in Cyprus, occasionally in Late Cypriote II-III.

Materials: This pendant is made of copper alloy, gold, or electrum.

Context: One example comes from Gath (no. 20; **Fig. 48:IV.a**), two come from Far'ah (nos. 267 and 687),[451] and six come from Megiddo (nos. 771, 776, 786, 787–789).[452] In the Aegean, two examples come from Perati (nos. 1737.055 and 1737.123). In Cyprus crescent pendants derive from Enkomi (no. 1969) and Hala Sultan Tekke (nos. 2175d and 2225); at the latter site, one of these pendants is part of an ornate necklace (no. 2225 from Tomb 23).[453] Elsewhere in the Levant, they frequently occur in Late Bronze Age contexts, such as at Sechem,[454] Deir el-Balah,[455] Beth Shean,[456] Beth Shemesh,[457] Kittan,[458] Lachish,[459] Ras Shamra,[460] and 'Ajjul.[461]

Discussion: This pendant is a distinctive element of Canaanite adornment, perhaps related to religious beliefs; it may have been apotropaic.[462] In the biblical texts, the crescent is also associated with rank and status; Midianite kings wear them with purple robes (Jud. 8:21, 26). The incorrect depiction of this pendant upside down in publications, with the horns of the crescent pointing upwards, illustrates the tendency by past scholars to impose bovine symbolism on this form.[463] Instead, these pendants may have represented a crescent moon in traditions derived from Near Eastern lunar mythologies associated with Sin (or another moon god).[464] Outside of the Levant, ancient texts mention crescent amulets and associate

[449] For extensive description and bibliography, see McGovern 1985, pp. 68–70.
[450] Maxwell-Hyslop 1971, pp. 79–80. For a list of most known parallels and references, refer to McGovern 1985, p. 70.
[451] Petrie 1932, pp. 23–25, Tomb 934, pl. 51 and Tomb 925, pls. 49 and 50:56.
[452] Loud 1948, pp. 81–83, 159, pl. 214:85.
[453] Niklasson 1983, fig. 471.
[454] Sellin 1926, p. 231, pl. 3.
[455] Dothan 1979, p. 77, Tomb 118, figs. 163 and 165.
[456] Early examples originate in city level VII in the Temple of Amenophis III: Rowe 1940, pp. 74, 79, pl. 30:53; in Early Seti I Temple: pl. 30:54; and see also Iron Age examples from the Temple of Ramses III: pl. 34:12 and 34:13.
[457] Grant and Wright 1939, pp. 47–48.
[458] Eisenberg 1977, p. 80.
[459] Tufnell 1958b, p. 242.
[460] Maxwell-Hyslop 1971, pl. 110c.
[461] For bibliography, refer to McGovern 1985, pp. 69–70.
[462] Braunstein 2011, pp. 9, 16.
[463] E.g., Stampolides 2003, nos. 1121 and 1122.
[464] Maxwell-Hyslop 1971, pp. 150–151. The Dilbat necklace from Mesopotamia, *ca*. 1600 BCE, includes a lunar crescent: p. 90, pl. 63a–b. This is believed to connect the necklace to Mari, where it is displayed on the

them with women and fertility, thereby linking them to children.[465] In the Aegean, a painted figurine appears to wear a necklace with a crescent pendant,[466] and one example is associated with a Bronze Age child's burial at Eleusis.[467]

4.6.4.2 Subtype 4IV.b: Spherical drop (1 unit)

Description: This uncommon drop of circular shape is comparable to Petrie's *bulla* type.[468]

Chronology: In this dataset, this pendant dates to the Iron Age IIA, although it also appears in Late Bronze Age contexts.[469]

Materials: This subtype is made of silver.

Context: The single example of this subtype in the dataset comes from Tomb 223 at Far'ah (no. 680; **Fig. 48:IV.b**).

4.6.4.3 Subtype 4IV.c: Spectacle spiral (6 units)

Description: Spectacle-spiral pendants incorporate two antithetic (or mirror image) wire spirals connected by a central hoop (McGovern Type VI.E). The ends of the spirals usually coil inwards towards the centre of the pendant and the hoop is sometimes twisted.

Chronology: This pendant dates to Iron Age I–IIA in the Levant, to Late Cypriote IIA in Cyprus, and to Submycenaean in the Aegean.

Materials: This subtype is made of copper alloy or gold.

Context: Similar pendants appear during the same period in the Aegean, Cyprus, Anatolia, and the Levant. Only a few of these pendants are included in this dataset, but this form was in fact popular and widely-distributed. An Iron Age IIA gold spiral pendant from Tawilan (no. 1474; **Fig. 48:IV.c**) has bosses on each spiral — each with a granular border. Also in Transjordan, a spectacle-spiral pendant of copper alloy from Wadi Fidan (discovered in association with a tassel earring) assisted the excavators in dating the site to the Iron Age IIA in comparison with the jewellery from Tawilan.[470] Another pendant, also of copper alloy, comes from Madaba (no. 1191); a similar copper alloy pendant was recovered from Far'ah in Cisjordan (no. 600).

In the Aegean, this pendant comes from Submycenaean Tomb 15B at Lefkandi (no. 1638), and in Cyprus, it comes from Late Cypriote IIIA Hala Sultan Tekke.[471] Also of interest is a pair of wire hoop earrings from the *Toumba* cemetery in Lefkandi dated to Sub-Protogeometric II;[472] these are each composed of a spectacle-spiral pendant (a motif identified

headdress of the seated moon god on palace frescoes: p. 91, fig. 67. For further discussion and bibliography, refer to Golani 2013, pp. 157–159.

[465] Wrede 1975.
[466] Kilian-Dirlmeier 1980a, pp. 33–34, fig. 2:20.
[467] Wrede 1975, p. 248.
[468] McGovern 1985, p. 75.
[469] McGovern 1985.
[470] Grave 371: Levy *et al.* 2005, p. 467.
[471] Åström 1983, no. 1157e.
[472] Higgins 1980b, pl. 231.b, T.13:16–17.

as a typically Greek mainland pattern)[473] of thin block-twisted wire that suspends from a figure-eight hoop of block twisted wire.[474] A pendant of the same subtype from *Toumba* appears to be part of a set with the earrings,[475] and all show a remarkable similarity to the one from Tawilan.

Finds indicate that antithetic spirals have a long history in the Near East and perhaps diffused from Mesopotamia to Anatolia and the Aegean and back to the Levant.[476] The earliest occurrences in Mesopotamia seem to be on a seal of the Third Dynasty of Ur in Mesopotamia, and a late third millennium BCE double spiral on a necklace comes from Sargonid grave 1284.[477] A mould for a double spiral comes from Nimrud.[478] This subtype also suspends from the necklace of a 14th–13th century BCE Phoenician statuette,[479] and from another dated to the 15th–13th centuries at Ras Shamra.[480] This motif of the double spiral is possibly related to quadruple spiral beads from Ur, Kültepe, and Mari,[481] and to similar pendants from a hoard from the Troad.[482] Double spiral pinheads in silver come from Zygouries, and others in bronze come from Naxos, Chalandriani, Troy II, Alaca Huyuk, Tarsus, and Tepe Hissar.[483] Late Bronze Age examples of double spirals on beads come from Pherae,[484] Mycenae,[485] and Pylos.[486] Complex double-spiral pendants from Tomb 45 at Aşşur date to the late 13th century,[487] and a simple copper alloy double-spiral pendant comes from the Governor's tomb at Gaza.[488] Spectacle-spiral pendants are also plentiful in the Bronze Age in Italy, from Ruvo in Apulia, from the cemetery of Carinaro, from Caserta, from Campania, and from the cemeteries of Pontecagnano and Capua.[489] By the Early Iron Age, spectacle spirals are seldom found in Greece, although the motif continued to flourish in central Europe and the Balkans.[490]

[473] Kantor 1947, p. 12 and P1. For the painted motif, see Furumark 1941, p. 356 fig. 60:46.

[474] Popham *et al.* 1980, p. 221, Tomb 13, pl. 231b.

[475] Popham *et al.* 1982, Tomb 38:39, pl. 30a.

[476] Mallowan 1947, p. 29, pl. 32:8, figs. 9–18. For further discussion and references on attempts to deal with the problem of spiral decoration in Asia, see Kantor (1947, pp. 18, 29–32), particularly regarding Middle Bronze II Minoan Crete as the point from which the spiral may have been diffused to Anatolia, Cyprus, and Egypt, and regarding the notion that the first expansion of Aegean trade was concomitant with the appearance of spiral ornamentation in Egypt. This spiral is different from returning spirals, which may be regarded as a typical example of a Mycenaean decorative motif: Evans 1892–1893, p. 218.

[477] Maxwell-Hyslop 1971, p. 23, pl. 22.

[478] Maxwell-Hyslop 1960, pl. 13:1.

[479] Vigneau 1936, pl. 100c–d.

[480] The pendant hangs from a beaded necklace on a seated female figure: Schaeffer 1939, p. 133, fig. 117. Claude Schaeffer considered this date low and revised the dates for the Ras Shamra figurines to the 19th to 17th centuries BCE: see Schaeffer 1962, p. 133.

[481] Maxwell-Hyslop 1971, pp. 34–35. Although related, double and quadruple spirals are different ornaments: Maxwell-Hyslop 1953, p. 78.

[482] Bass 1970, pp. 337–338, pl. 86, figs. 20–23.

[483] Higgins 1980a, p. 52, fig. 5b.

[484] Kilian 1975.

[485] Karo 1930–1933, pl. 21:59.

[486] Blegen *et al.* 1973, figs. 190:10 and 12.

[487] Haller 1954, pl. 34.

[488] Petrie 1933, pls. 7–9. Maxwell-Hyslop (1971, pl. 253) notes a similar double spiral in the Boston Museum of Fine Art from Luristan.

[489] Bietti Sestieri and Macnamara 2007, p. 15.

[490] Higgins 1980a, p. 74.

Discussion: Although the prevalence of the double spiral renders it of little use as a chronological marker,[491] it remains useful as an indicator of cultural contact. Sumerian technical methods were used by Hittite smiths, who developed the double spiral pattern into an elaborate interlocking design for which an exact parallel is known from Crete; from there, the motif possibly returned to the Levant.[492] Items such as double-spiral pinheads and quadruple-spiral beads demonstrate the homogeneity of jewellery working in the region and the close connections between western centres such as Poliochni and Troy.[493] Scholar's work on these pendants' presence in the Near East, including studies by Frankfort, Kantor, Mallowan, and Maxwell-Hyslop, have largely neglected the large concentration of these objects in central and southeastern Europe during the Late Bronze Age.[494]

The importance of the double spiral lies in the probability that it possessed a magical or amuletic function related to fertility; this function can easily be traced to Mesopotamia where the motif was recognised as a divine symbol and was often associated with the goddess Ninhursag.[495] The double spiral, despite retaining some amuletic characteristics, may eventually have functioned in a utilitarian capacity as a hook.[496] The symbolic value of the spiral is apparent through its high-status associations on Minoan Crete, where it appears as a decorative motif on vessels, weapons and architectural features, and on the mainland from the Mycenaean period, where it was an ornament with royal or aristocratic associations.[497] Decorations on Philistine I pottery from Ashdod and Ekron include antithetic spirals arranged in a symmetrical, heraldic fashion; this arrangement represents the most common decorative motif on Philistine bell-shaped bowls,[498] and may have had a maritime connotation.[499] Many Cypriote parallels for this pottery motif come from Late Cypriote IIIA–B contexts,[500] such as one on a vessel from Hala Sultan Tekke.[501]

[491] Cf. Bass 1970, p. 339.

[492] The Royal tombs of Ur are thus of great importance when considering the work of craftsmen on the Asiatic coast and also in relation to the products of smiths based in Cyprus, Crete, Rhodes, Lemnos, the Greek mainland, and Etruscan Italy: Maxwell-Hyslop 1960, p. 111.

[493] The spiral pin heads are attested at Poliochni and Troy and spiral beads at Ur, Brak, Troy, Mari, Alaja, and in Iran: Maxwell-Hyslop 1960, p. 109.

[494] E.g., at Věrovany, Mankovice, and Sazovice: Říhovský 1979; Přestavlky: Říhovský 1972; Uffing am Staffelsee, Mintraching, Raisting, Straubung, Hesselberg, Burgsalach, and Riegsee: Wels-Weyrauch 1991; Smogolice: Gedl 1976; Gürtel: Gedl 1992; Vergina: Müller-Karpe 1974. Frankfort discussed the spiral reaching Crete via the Danube in Eastern Europe (1924, p. 116), while Childe (1929, pp. 66–67, 94) speculated that the spectacle spiral ultimately reached Europe by way of Anatolia from Sumeria, as too would have Cycladic spirals.

[495] Maxwell-Hyslop 1960, pp. 107–108; Frankfort 1944, p. 198, figs. 2–3. For further references to this symbol, see also Van Buren 1945.

[496] See Maxwell-Hyslop 1960, p. 114.

[497] For various examples and references, see Hiller 2005. Antithetic spirals are rare in the Aegean without a central triglyph or lozenge between the spirals: Mountjoy 1999, figs. 121:121, 223:488, and 393:9. When the spiral incorporates a central triglyph or lozenge, it is one of the most popular motifs in the Mycenaean IIIB–C repertoire: Popham 1965, pp. 316–342. For more on the painted motif in the Aegean, see Furumark 1941, p. 356.

[498] Dothan, T. and Zuckerman 2004, pp. 1–54, especially 37.

[499] Ben-Shlomo 2010, p. 163.

[500] Kling 1989, p. 89.

[501] Åström *et al.* 1983, p. 12, fig. 7.

4.6.4.4 Subtype 4IV.d: Disc plaque (10 units)

Description: This disc-shaped pendant of sheet-metal (McGovern Type VI.D.1–3) possibly originated in the Near East.[502] An upper tang coils forward to create a suspension cylinder. Often this subtype has decorative *repoussé* dots or engraved lines on the pendant face and (occasionally) on the cylinder.

Chronology: In this dataset, this pendant dates to the Late Bronze Age–Iron Age I in the Levant, to Late Helladic IIIB–C in the Aegean, and to the Late Cypriote II–III in Cyprus. This subtype appears with a central boss from the Late Bronze Age I in the southern Levant and dates to as early as *ca.* 2000 BCE at Brak.[503] More often than not, disc pendants in Early Iron Age contexts may be heirlooms.[504]

Materials: This pendant is made of copper alloy, silver, or gold.

Context: In Philistia, this subtype comes from Azor (no. 14); in Cisjordan, it comes from Megiddo (no. 770; **Fig. 48:IV.d**). In the Aegean, three examples decorated with embossed rosettes come from Perati (nos. 1737.120–1737.122), while a fourth from that site is decorated with an embossed spiral (no. 1737.107), and in Cyprus — with a central boss — it comes from Enkomi and Hala Sultan Tekke (nos. 1968, 2144, and 2242). Excavators recovered additional Cypriote examples from Alaas,[505] Kition,[506] Kouklia,[507] and Lapithos;[508] this subtype continues to be found in Cypro Geometric I (and later) tombs.[509]

4.6.4.5 Subtype 4IV.e: Pectoral plaque (2 units)

Description: This dataset includes a single pair of pectoral plaques made of sheet-metal (McGovern TypeVI.F.3:335).[510] These plaques connect by means of a chain; one plaque has three lines of incised chevrons, while the other has the remnants of one line of chevrons.[511]

Chronology: The examples in this dataset date to Iron Age I (*ca.* 1125–1100).[512]

Materials: These pendants are made of silver.

Context: This silver pair of pendants comes from Tomb 101 at Sa'idiyeh (no. 1332; **Fig. 48:IV.e**). Pritchard considered the richly furnished tomb to have *Sea Peoples* associations.[513] I exclude from the dataset a pair of copper triangular plaques that date to the later

[502] Yon 1971, pp. 10–11.
[503] McGovern 1985, p. 72.
[504] McGovern 1985, p. 71.
[505] Karageorghis 1975, p. 63.
[506] Karageorghis 1974, pls. 74:201 and 91:201.
[507] Karageorghis 1975, n. 6.
[508] Tomb 420: Gjerstad *et al.* 1934, pl. 53.2:20.
[509] Yon 1971, pp. 10–11.
[510] Pritchard 1980, pp. 13–14, figs. 3:11 and 49:5; Green 2006, Appendix G.
[511] Cf. chevrons on toggle pins and wine set from the same tomb as well as on another wine set from Tomb 32: Green 2006, p. 421.
[512] Laemmel 2003, Table 5.
[513] Pritchard 1968.

Iron Age at Far'ah.[514] A copper alloy chain connects these plaques from Far'ah, possibly as part of a belt or an attachment to a dagger sheath.[515] One plaque has openwork with an area removed at either side of a central vertical strip. This strip and the two outside strips have chevron markings, recalling those on the Sa'idiyeh plaques. The second plaque has incised markings suggestive of the first plaque's cutaway design. Such triangular plaques also occur in association with daggers at Madaba[516] and at Megiddo.[517]

4.6.4.6 Subtype 4IV.f: Piriform (5 units)

Description: This piriform (pear-shaped) pendant of sheet-metal often has an upper tang rolled into a suspension cylinder. Maxwell-Hyslop's classification system for these objects remains useful:[518] (1) a pictorial version, often of a standing female figure sometimes wearing a Hathor headdress; (2) a representational version, often decorated with a dot border with the head area incised or in *repoussé*, with bossed dots for the breasts and navel, with a lower portion marked with dots, and sometimes with incised lines marking the female genitalia; and (3) a stylised version, sometimes with an outlined head and a few incised lines or dots marking borders and bodily features. Examples marked with only a vertical central line and punched dots in the upper zone may depict a stylised representation of the pubic region. This subtype is similar in shape to leaf Subtype 4III.b.

Chronology: In this dataset, this pendant dates to Iron Age I in Cisjordan and to Late Cypriote II–III in Cyprus. This subtype is also common along the coast and the Shephelah of the southern Levant during the Late Bronze Age. Those from later contexts are possibly heirlooms.[519]

Material: This pendant is made of gold.

Context: One example in this dataset derives from a settlement context at Beth Shean (no. 184; **Fig. 48:IV.f**). This pendant has dots around the perimeter and lines in the centre that may be a schematic representation of a face. The remaining four examples come from Cyprus, one from multi-phase Tomb 32 at Enkomi (no. 1959) and three from a Late Cypriote IIIA jewellery hoard from Hala Sultan Tekke (nos. 2175f–h). The Enkomi piece has ridged and incised lines along its suspension cylinder. The decoration on the pendant, impressed from both the front and the back, depicts a triangular face with large eyes, bulbous nose and thin lips, and is surrounded by a hatched bar that possibly represents a necklace; below the necklace are breasts, a navel, and a divided triangle representing genitalia.

[514] Laemmel 2003, p. 213.
[515] Petrie 1930, p. 9; Laemmel 2003, pp. 213, 284.
[516] Harding *et al.* 1953, pl. 5:189–194.
[517] Found together with bronze chains: Loud 1948, pl. 117:6–11.
[518] Maxwell-Hyslop 1971, pp. 138–140. See also Platt 1976.
[519] McGovern 1985, pp. 31–32.

4.6.5 Type 4V: Replicas of Manufactured Objects

4.6.5.1 Subtype 4V.a: Bell (3 units)

Description: This is a bell-shaped object whose exterior is fluted with incised lines. Abrasive cleaning of the inner surface of all the units has revealed the bright copper tone of the metal. The upper part of each pendant includes an attachment that might be the remains of a lunate hoop. It is likely that these objects are tassel earring pendants as has previously been suggested,[520] although the shape of these pendants is quite different to other subtypes of bud-like/tassel earrings (Subtypes 4II.d–4II.f).

Chronology: These pendants date to Late Bronze Age Iron Age IIA.

Material: This subtype is made of copper alloy.

Context: Three examples come from multi-phase Tomb C at Sahab (nos. 1285, 1288, 1289; **Fig. 49:V.a**).

4.6.5.2 Subtype 4V.b: Basket (1 unit)

Description: The single example of this subtype in this dataset is a hollow open box/basket with a pyramid of granules set within it. This form can also appear as a solid cube. Additional discussion of this pendant is included under the entry for earring Subtype 4III.b, in which it has wire handles and a suspension ring from which it suspends from a lunate.

Chronology: This pendant dates to Iron Age II.

Material: Although the specimen in this dataset is made of gold, this subtype is usually of silver, and occasionally of copper alloy.

Context: One example comes from Tomb 229 at Far'ah (no. 689; **Fig. 49:V.b**). A box of similar shape in silver from Beth Shean, although excluded from this dataset due to its late date, contained a scaraboid.[521]

Discussion: This pendant is a typically *Phoenician* style of adornment associated with Phoenician trade and colonisation.[522]

4.6.6 Type 4VI: Other

4.6.6.1 Subtype 4VI.b: Drop (5 units)

Description: This subtype of pendant has a shape that does not fit any of the other subtypes; it may be circular, elliptical, ovoid, or needle-shaped. In some cases, a metal cap holds

[520] Golani 2013, p. 116.
[521] Rowe 1940, pl. 30:46.
[522] Golani 2013, p. 73.

a stone or vitreous pendant in place (nos. 780–782); in other cases, a perforated stone object suspends from a metal hoop (no. 156), possibly acting as a weight.[523]

Chronology: These pendants date to Iron Age I.

Material: Subtype 4VI.b is made of gold or copper alloy.

Context: This pendant occurs in settlement contexts at Ekron (no. 106), Beth Shean (no. 156), and Megiddo (nos. 780–782; **Fig. 49:VI.b**).

4.7 CATEGORY 5: BEAD TYPOLOGY

Beads are a nearly ubiquitous artefact type and constitute the largest and most diverse category of jewellery within the Early Iron Age corpus. These beads are likely to have been components of necklaces, although there is little *in situ* evidence. This category is organised according to the subtypes: (1) *spheroid*; (2) *oblate*; (3) *barrel*; (4) *bicone*; (5) *cylinder*; (6) *relief beads*; and (7) *other shapes*. I consider a bead to be any object with a central perforation suitable for stringing. In the database, a bead's measurements include the *length* of its perforation, as well as its *diameter*, which is the maximum diameter of the bead measured perpendicular to its perforation. There is a wide range of subtypes, but most consist of two halves of sheet-metal formed over a moulding block and then fused together, or of foil covering an inner core of inexpensive material. Type 5VI relief beads are the most complex forms; these have embossed or stamped motifs and include incised and *en pointillé* lines.

4.7.1 Type 5I: Spheroid

4.7.1.1 Subtype 5I.a: Spherical hollow (3 units)

Description: These spherical hollow beads have two domed halves soldered or fused together.

Chronology: These beads appeared in the Levant during the Middle Bronze Age and were in wide circulation by the Iron Age.[524] The examples listed in this dataset date to Iron Age IIA in the southern Levant and to Late Minoan IIIA in the Aegean.

Material: This subtype is made of gold.

Context: One example from Ekron (no. 119; **Fig. 50:I.a**) has the seam filed and polished smooth,[525] as does another from Far'ah (no. 694). A hollow bead decorated with granulation comes from Sellopoulo on Crete (no. 1743); this object's closest mainland parallel is

[523] For discussion and bibliography, see Golani 2013, pp. 168–169.
[524] Buitron 1979, p. 65: Maxwell-Hyslop 1971, p. 126.
[525] Golani 1996, pp. 76–77. These are similar to beads from Troy: Maxwell-Hyslop 1971, pp. 7–10, 53, pl. 6c.

one from Vapheio,[526] and several others from the Peloponnese, although they are all thought to be of Cretan origin by virtue of their workmanship.[527]

4.7.1.2 Subtype 5I.b: Irregular spheroid (1 unit)

Description: This is a rare spheroid bead with a stepped gold cap at either end.

Chronology: This bead dates to Late Cypriote II–III.

Material: Subtype 5I.b is made only of gold.

Context: One example comes from Tomb 2 at Hala Sultan Tekke (no. 2196; **Fig. 50:I.b**).

4.7.1.3 Subtype 5I.c: Gadrooned spheroid 'melon' (20 units)

Description: Melon beads (Beck Type XXIII.B.1.a) are made of ribbed sheet-metal; light incisions occasionally mark the indentations between the ribs. Unlike 'fluted' beads that have furrowed grooves taken from their surface, these beads have gadroons or ribs.[528]

Chronology: The examples in this dataset date to Iron Age I in the Cisjordan and to Late Cypriote II in Cyprus, but this subtype first appears during the MB II in vitreous materials.

Material: When made of metal, these beads are of silver or gold, but most often, they are of vitreous materials such as faience.

Context: This subtype comes from burial contexts at Far'ah (no. 301), Enkomi (no. 1788), and Maroni (no. 2366; **Fig. 50:I.c**). This bead was also popular in Cyprus as a toggle pin head (Subtype 6I.b.x).

4.7.1.4 Subtype 5I.d: Fluted spheroid 'melon' with flared ends (3 units)

Description: This bead is similar to Subtype 5I.c, but with the addition of flared (or splayed) collars around each perforation.

Chronology: The examples in this dataset date to Late Cypriote II–III, but this subtype also appears in vitreous materials during the Late Bronze Age–Iron Age II periods in the southern Levant.

Material: This subtype is made of gold.

Context: Three examples come from Tomb 19 at Enkomi (no. 1916; **Fig. 50:I.d**) amongst a necklace of 24 hollow beads and two cylinder mounts.[529]

[526] Tsountas 1899, p. 151, pl. 7:7. Also Mycenae T.515: Wace 1932, p. 192, pl. 29.24; Mycenae T.55: National Museum 2845; Prosymna T.44: Blegen 1937, p. 210, fig. 541.11; Dendra T.10: Persson 1942, p. 77, no. 21, pl. v; Asine T.1:1: Frodin and Persson 1938, p. 371, no. 5, fig. 241.
[527] Frodin and Persson 1938, p. 216.
[528] *Contra* Goring (1983b), who prefers 'fluted'.
[529] Marshall 1911, p. 670; Crewe *et al.* 2009, no. 19.87; Goring 1983b, no. 526.

4.7.2 Type 5II: Oblate

4.7.2.1 Subtype 5II.a: Hollow circular oblate (166 units)

Description: Hollow oblate beads (Beck Type I.B.1.a) made of sheet-metal are similar in shape and construction to Subtype 5I.a, but have a slightly depressed profile, meaning their length is usually shorter than their width.

Chronology: This subtype appears within Late Bronze Age–Iron Age IIA contexts in the Levant, but it was already familiar in third millennium Mesopotamia and Troy.[530] In the Aegean, it dates to Late Minoan IIIA, and Late Helladic IIIB–C, while in Cyprus, it dates to Late Cypriote II–III.

Material: Subtype 5II.a is made of gold, silver, or copper alloy.

Context: In the Levant, hollow oblate beads come from Gath (no. 18; **Fig. 50:II.a**), Beth Shean (no. 157), and Nasbeh (no. 946).[531] At Sellopoulo in the Aegean, 32 examples fanned out in a line near the left wrist of the deceased in Tomb 4 as though they were components of a bracelet (no. 1744).[532] This type is also common at Perati where small quantities were found in several tombs.[533] The widest distribution of this subtype is in Cyprus, where it occurs throughout the Late Cypriote period at sites such as Enkomi, Hala Sultan Tekke, and Maroni.[534]

4.7.2.2 Subtype 5II.b: Solid depressed circular oblate (192 units)

Description: These globular beads have a depressed or flattened profile, which makes them appear almost cylindrical; they can be solid metal or be foil over a core such as bitumen. The literature sometimes incorrectly refers to these beads as 'drum' beads, which are in fact beads that have a shape similar to fish vertebrae.

Chronology: In the Aegean, Subtype 5II.b dates to Subminoan and Late Helladic IIIB, and in Cyprus, it dates to Late Cypriote II–III.

Material: The examples in this dataset are all made of gold, but there are parallels in clay[535] or faience.[536]

[530] Maxwell-Hyslop 1971, pp. 7–10, 53, pl. 6c.

[531] Golani notes two of this subtype at Far'ah; however, one from Tomb 226 dates from after Iron Age IIA, and another from Tomb 231 is classified here as Subtype 5I.a. He includes another from Tomb 7 at Beth Shean and an unpublished bead from Ekron: refer to Golani 2013, p. 190, Type I.5.

[532] Cf. Kalyvia: Savignoni 1904, pp. 595, 598, figs. 58 and 62, pl. 39. For additional examples see Zafer Papoura T.7 and T. 36: Evans 1906, figs. 20 and 60; Mycenae: Savignoni 1904, fig. 59. See also Higgins 1961a, p. 79.

[533] Konstantinidi 2001, pp. 135–144.

[534] Gjerstad *et al.* 1935.

[535] Coldstream and Catling 1996, pp. 6, 80, 238, 279; Evely 2006, pp. 83, 111.

[536] Popham *et al.* 1984, p. 258.

Context: Archaeologists recovered a collection of 81 small solid gold beads (no. 1624; **Fig. 50:II.b**) from Tomb 200 at the Knossos North Cemetery,[537] which are similar to examples from Kerameikos.[538] A large number of beads discovered at Perati included 87 from a single necklace from Tomb 147 (no. 1737.114). The hitherto unseen flattened globular shapes perhaps developed from Cypriote styles;[539] a collection of 17 of this subtype comes from Tomb 2 at Hala Sultan Tekke (no. 2192), and others come from Enkomi, Kourion, and Klavdia.[540]

4.7.2.3 Subtype 5II.c: Grooved circular oblate (11 units)

Description: Oblate beads have two domed halves soldered or fused together, or else are involute (rolled) sheet-metal with the edges soldered or fused together (Beck Type XXIII.B-C.1.a). This subtype has vertical lines incised around its circumference and it sometimes appears with collared perforations.

Chronology: Subtype 5II.c dates to Late Cypriote I–III in Cyprus and Late Helladic IIIB–C in the Aegean.

Material: This bead is made only of gold.

Context: In this dataset, this subtype comes from the Aegean within Tomb 1 at Perati (nos. 1737.005) and from Cyprus at Hala Sultan Tekke (nos. 2175a–b, 2194; **Fig. 50:II.c**) and Maroni (nos. 2341, 2362–2363, 2368).

4.7.3 Type 5III: Barrel

4.7.3.1 Subtype 5III.a: Hollow circular barrel — short (145 units)

Description: Barrel-shaped beads have two elongated halves of sheet-metal soldered or fused together; these beads have a larger central diameter that tapers slightly towards the ends. The seam of the sheet is often visible to the unaided eye. Alternatively, their construction involves applying metal foil over an inner core. Occasionally, these beads have wire collars surrounding their perforations. Although the barrel subtype is common, short varieties made of metal whose length is similar to (or less than) their diameter are rare.

Chronology: Subtype 5III.a dates to Iron Age I in Cisjordan and to Submycenaean in the Aegean.

Material: This bead is made of gold.

[537] Coldstream and Catling 1996, pp. 193–194, pl. 265.
[538] Higgins 1996, p. 539; Marshall 1911, no. 622. For Kerameikos, refer to Higgins 1996, p. 539.
[539] Higgins 1996, p. 539.
[540] Åström, L. 1972, p. 32.

Context: Tomb 62 at Megiddo (no. 844) contained 10 of this subtype, and Tomb N136 at Kerameikos (no. 1587; **Fig. 50:III.a**) contained a necklace of 135 of this subtype, along with one glass disc bead and a rock crystal circular bead.[541]

4.7.3.2 Subtype 5III.b: Hollow circular barrel — long (28 units)

Description: This bead is similar to Subtype 5III.a, but its length is greater than its diameter (Beck Type I.D.1.b). Occasionally the perforations have wire collars.

Chronology: These beads date to Late Bronze Age–Iron Age IIA Cisjordan and to Late Cypriote II–III Cyprus.

Material: Subtype 5III.b is made of either gold or copper alloy.

Context: This subtype comes from Beth Shean (no. 186) and Far'ah (nos. 265–266, 643, 695) in Cisjordan, and from Enkomi (nos. 1789, 1797, 1916, 2015; **Fig. 50:III.b**) and Hala Sultan Tekke (nos. 2193, 2201) in Cyprus.

4.7.3.3 Subtype 5III.c: Banded grooved barrel — long (24 units)

Description: Some barrel beads have an embossed central band with lightly incised vertical lines around their circumference (similar to Beck Type XXIII.B-C.1.a). Occasionally the perforations have wire collars.

Chronology: These beads date to Late Cypriote II–III.

Material: This subtype is made of gold.

Context: Subtype 5III.c is limited to tombs at Enkomi (nos. 1916, 1961, 1973, 1988, and 2093–2094; **Fig. 50:III.c**). In Tomb 19, a necklace was comprised of 19 of these beads (no. 1916).[542]

4.7.3.4 Subtype 5III.d: Hollow elliptical barrel — long (3 units)

Description: This uncommon bead is similar to Subtype 5III.b, but has an elliptical or ovoid cross-section rather than a circular cross-section.

Chronology: This subtype dates to Iron Age I.

Material: This bead is made of gold or copper alloy.

Context: Three examples are included in this dataset; two of these beads come from Tomb 66 at Beth Shean (no. 185; **Fig. 50:III.d**) and the other bead comes from Tomb C1 at 'Eitun (no. 234).

[541] Ruppenstein 2007, fig. 11.
[542] Marshall 1911, p. 670; Crewe *et al.* 2009, no. 19.87; Goring 1983, no. 526.

4.7.4 Type 5IV: Bicone

4.7.4.1 Subtype 5IV.b: Circular convex bicone (56 units)

Description: Biconical beads have two elongated halves of sheet-metal soldered or fused together (Beck Type I.D.1.b). Alternatively, this subtype consists of metal foil over an inner core. The bead's carination is the widest point, midway along the axis of perforation, and it occasionally has wire collars surrounding its perforations (nos. 799 and 1951).

Chronology: This bead occurs in Iron Age I–IIA contexts in Cisjordan and in Late Cypriote II–III contexts in Cyprus.

Material: This subtype is typically made of gold, but occasionally is made of copper alloy.

Context: The majority of this subtype comes from Stratum VIIA at Megiddo. Several examples also come from Far'ah and only one comes from Enkomi (no. 1951), despite this being one of the most commonly occurring gold beads in Cyprus.[543]

4.7.4.2 Subtype 5IV.c: Grooved convex bicone (7 units)

Description: This bead is similar to Subtype 5IV.b, but has grooved lines on either side of the carination (Beck Type XXIII.B-C.1.a).

Chronology: This subtype dates to Iron Age I–IIA in the southern Levant.

Material: Subtype 5IV.c is made of gold.

Context: The examples in this dataset come from Far'ah and Beth Shean in Cisjordan, although it apparently also occurs in Cyprus.[544] This object's presence at Far'ah predates its more common presence in the region during the 10th century BCE, such as at Tomb 1074 at 'Ajjul.[545]

4.7.4.3 Subtype 5IV.d: Truncated convex bicone — long (1 unit)

Description: This bead is similar to Subtype 5IV.b, but it has truncated ends, meaning that the perforations are larger (Beck Type I.C.1.f). This subtype is regularly confused with Subtype 5IV.b in publications and it is difficult to classify correctly unless physically examined.

Chronology: This bead dates to Iron Age I.

Material: In this dataset, Subtype 5IV.d is made of gold, but most often it is made of stone or vitreous materials.

Context: This subtype comes only from Stratum VIIA at Megiddo (no. 784; **Fig. 50:IV.d**).

[543] See Åström, L. 1972, p. 575.
[544] Cf. Enkomi Tomb 3: Gjerstad *et al.* 1934, pl. 78.3:233–234; Tomb 110: Courtois 1981, fig. 160:4A–B. See also Åström, L. 1972, p. 505.
[545] Maxwell-Hyslop 1971, p. 227.

4.7.5 Type 5V: Cylinder

4.7.5.1 Subtype 5V.a: Cylinder disc made of granules (9 units)

Description: Each of these beads is made by soldering granules together to create a ring (Beck Type XXV.A.I.d). The literature also refers to these as 'granulated flower beads.'[546]

Chronology: This subtype dates to Late Bronze Age–Iron Age IIA.

Materials: Subtype 5V.a is made of precious metals such as silver, electrum, or gold.

Context: In Cisjordan, granular discs come from Far'ah (nos. 506, 545, 588; **Fig. 50:V.a**) and Beth Shean (no. 163), and in Transjordan, they come from Sa'idiyeh (no. 1331) and Tawilan (no. 1478). The bead from Tawilan has an inner ring encircled by an outer row of granules, comparable to one from Troy.[547]

Discussion: Individual beads made by soldering together five or more granules into a ring are one of the earliest and simplest forms of granular decoration. Granulation is a complex technique known from as early as 2500 BCE in Mesopotamia,[548] and is widespread in Mycenaean Greece and Crete, and in Cyprus.[549]

4.7.5.2 Subtype 5V.b: Cylinder made of granules (136 units)

Description: This bead is composed of rings of granules that are stacked one upon the other and fused together to create a cylindrical or tubular bead (Beck Type XXV.A.I.a).[550] An alternative construction involves covering cylindrical tubes in rows of granulation. Short beads are classified in the dataset as Subtype 5V.b.1 (81 units); these beads are usually formed of three or four granulated rings. Long beads formed of five or more rings are classified as Subtype 5V.b.2 (49 units). As the only distinction between these is their slightly different lengths, they are discussed together below.[551]

Chronology: This bead dates to early Iron Age I–IIA in the southern Levant and to Late Cypriote III in Cyprus. This subtype was common in the Aegean from Late Helladic II–III, and it makes a regular appearance from Late Helladic IIIB.[552]

Material: Most examples are of gold, but they can also be of copper alloy, silver, or electrum.

Context: This subtype comes from Philistine contexts at Far'ah, such as Tomb 552, which yielded one example in association with Philistine pottery.[553] Additional Early Iron Age

[546] Laemmel 2003, cat. 128.
[547] Maxwell-Hyslop 1971, p. 52, fig. 38c–d.
[548] Woolley 1934, p. 297.
[549] Curtis 1915–1916, pp. 63–85.
[550] Loud 1948, pl. 215:106.
[551] See Catalogue B regarding granulated bead subtypes (5V.b1 or 5V.b.2).
[552] E.g., Mycenae: Wace 1932 and Xenaki-Sakellariou 1985; Tiryns: Karo 1930, pl. 4; Dendra: Persson 1931, pl. 27; see also Higgins 1980a, p. 76.
[553] Maxwell-Hyslop 1971, p. 227, pl. 207; Petrie 1930, p. 37, pl. 36:532.

examples appear in Cisjordan at Megiddo (no. 777), and in Transjordan at Sa'idiyeh (no. 1399; **Fig. 50:V.b**) and Tawilan (nos. 1462–1464). The bead from Sa'idiyeh was associated with high-status Tomb 101,[554] while the excavators found those from Tawilan threaded onto an earring hoop.[555] In Cyprus, granulated cylinder beads come from Tomb 23 at Hala Sultan Tekke (nos. 2223–2224).[556] This subtype is occasionally associated with tassel earrings, a style of adornment unique to the Iron Age I–IIA period; this style occurred at both Far'ah and Tawilan.

This subtype occurs in Greece from the 15th century,[557] such as 14 gold examples in the Acropolis Treasure from Mycenae[558] and 17 gold examples in the Tiryns Treasure.[559] The latter beads have larger perforations and finer granulation; the coarse beads of the Acropolis perhaps date to early in the Late Helladic, while the finer work might date to late Late Helladic II.[560] In this dataset, Aegean examples come from Tomb 1 at Perati (no. 1737.004). Even earlier examples come from Anatolia, with several discovered at Troy.[561] The granule cylinder bead closely replicates an exquisite specimen from Early Minoan Mochlos made of tightly coiled wire in minute rows of spirals.[562]

Discussion: Though rare, the use of granulation without backings (as seen on the Tawilan beads) is seen on pendants from Uruk dated to the Neo-Babylonian period.[563] The technique is also seen on cylinder beads from Ekron[564] and on tassel earrings from Tawilan,[565] and is widespread in Mycenaean contexts that date from the mid-second millennium BCE.[566] Granulated beads are possibly elements of *Sea Peoples*' material culture on the basis of associated artefacts at Far'ah,[567] Tawilan,[568] and Sa'idiyeh.[569]

4.7.5.3 Subtype 5V.c: Double granulated cylinder spacer (3 units)

Description: This is a spacer bead formed by joining together two granulated cylinders side-by-side by means of alternating rows of granules (Beck Type XXV.A.I.f).

[554] The tomb was originally dated to the 13th century BCE: Pritchard 1980, fig. 3.1; cf. Green 2013. Although evidence for *Sea Peoples* in the Jordan Valley is ambiguous, the granulated beads seem to strengthen the argument for a coastal connection with Sa'idiyeh (Green, pers. comm.)

[555] Maxwell-Hyslop 1984. This securing of the beads might be evidence that the owners intended to recover the hoard: Ogden 1995, nos. 7–9, and 72, fig. 8:19.

[556] Also at Amathus: Laffineur 1986, no. 103, fig. 28; and Enkomi: Åström, L. 1972, pp. 505, 830.

[557] Higgins 1961, p. 74, pl. 106.

[558] Schliemann 1880 [1967], p. 361, figs. 533–538; Thomas 1938–1939.

[559] E.g., Nat. Mus. 6213. Coldstream and Catling 1996, p. 539.

[560] Thomas 1938–1939, p. 76. See also no. 3185 from Mycenaean Tomb found in 1895; no. 3373 from Dimini; no. 4932 from Mycenaean Tomb found in 1899. Additional examples come from Dendra: Persson 1931, pl. 27; 1942, pl. 5:1; Perati: Iakovides 1970, fig. 128:9; Prosymna: Blegen 1937, fig. 541, no. 14; Pylos: Blegen *et al.* 1950, fig. 356:9–10; Thebes: Symeonogleou 1973, pl. 88, fig. 263 and Keramopoullos 1917, fig. 129.

[561] Blegen *et al.* 1950, p. 351, no. 35-561, fig. 356f.

[562] Davaras 1975, p. 106, pl. 22d.

[563] van Ess and Pedde 1992, pl. 77, no. 924.

[564] Golani's Type I.1 dates from seventh century BCE Philistine levels: Golani 2013, pp. 186–187.

[565] Ogden 1995, no. 4, figs. 13–15.

[566] Ogden 1995, p. 72; Higgins 1980a, p. 74.

[567] Maxwell-Hyslop 1971, p. 227, pl. 207; Petrie 1930, p. 37, pl. 36:532.

[568] Ogden 1995, nos. 7–9, and 72, fig. 8:19.

[569] Green (pers. comm.).

Chronology: Subtype 5V.c dates to Iron Age IIA in the southern Levant.

Materials: This bead is made of gold.

Context: The only Early Iron Age examples come from a hoard found near Burial XXV at Tawilan (nos. 1475–1477; **Fig. 50:V.c**). A similar spacer bead comes from an Early Iron Age hoard at Eshtemoa.[570]

4.7.5.4 Subtype 5V.d: Plain cylinder disc (39 units)

Description: This cylinder disc has a circular section and distinctly squared or chamfered edges, with a shorter length than diameter. To create this bead, a narrow strip of wire winds around a thin tube and then has its edges fused together, or alternatively, a piece of involute sheet-metal has its edges soldered or fused together.

Chronology: This subtype dates to Iron Age I in the southern Levant and Late Helladic IIIC in the Aegean.

Materials: These beads are made of copper alloy, electrum, or gold.

Context: This subtype comes from Cisjordan at Far'ah (no. 540; **Fig. 50:V.d**) and Megiddo (nos. 797–798), and from the Aegean at Perati (no. 1737.070).

4.7.5.5 Subtype 5V.e: Plain cylinder (3 units)

Description: This bead is made of involute sheet-metal with its edges soldered or fused together to create a tube (Beck Type I.D.2.b) and has a greater length than diameter.

Chronology: This bead dates to Iron Age I.

Materials: Subtype 5V.e is made of either silver or gold.

Context: This subtype is rare, and in the Early Iron Age comes only from Far'ah (nos. 308, 446 and 525; **Fig. 50:V.e**).

4.7.5.6 Subtype 5V.f: Penannular cylinder (3 units)

Description: Penannular beads are made of involute sheet-metal with non-fused edges.

Chronology: This bead dates to Iron Age I in Cisjordan and to Late Cypriote II–III in Cyprus.

Materials: Subtype 5V.f is made of gold or silver.

Context: One example in this dataset comes from Megiddo (no. 831; **Fig. 50:V.f**) and two examples come from Maroni (nos. 2374–2375). This subtype also comes from Dor, where it is made of either gold or silver; the join on one silver example is fused only at its centre indicating the object was possibly worn with capped ends similar to Cypriote capped beads.[571]

[570] This example has decorative granular triangles: Yeivin 1990, fig. 17:7.
[571] Ben Basat 2011, pp. 54–55.

4.7.5.7 Subtype 5V.g: Coil cylinder (65 units)

Description: The literature also refers to this coiled wire bead as a 'spiral wire' bead or 'spindle' bead (Beck Type XVIII.A.I.a).[572]

Materials: Coil cylinders in this dataset are made of electrum or gold. This subtype is also made of bronze at several sites in Cyprus.[573]

Chronology: Subtype 5V.g mainly dates to Late Bronze Age–Iron Age I in the Levant and to Late Cypriote II–III in Cyprus, but it has a long tradition and first appears in the Royal Tombs of Ur.[574]

Context: This subtype comes from Gath in Philistia (no. 19)[575] and Far'ah in Cisjordan (nos. 480 and 524). Similar coil beads also come from Enkomi.[576] In the southern Levant, Late Bronze Age examples have been found at Beth Shemesh and at 'Ajjul.[577] Coil beads such as those from Altıntepe in Anatolia are formed from a single strand of coiled wire and have a gold wire looped at the end of each bead to create a collar (Beck Type XVIII.bR.1);[578] a similar collared version comes from Akhziv.[579] This style of coiled wire (also known as a *saltaleone*) is ubiquitous in Early Iron Age graves of central and southern Italy.[580] Simple coiled tubes also occur in the Aegean, such as one from *Toumba* Tomb 43 at Lefkandi dated to Subprotogeometric II (*ca.* 925–825 BCE).[581]

Discussion: In the Levant, biconical beads are also formed using spiral wire (Beck Type XVIII.A.I.b). These biconical beads are reminiscent of the tapered cone pendants on Subprotogeometric II earrings from Tomb 38 at Lefkandi. [582] In technique, the coil of closely wound wire closely resembles the coiled cone attached to Levantine tassel earrings (Subtype 1II.f). These cones made of spiral wire are also similar to the cone pendants attributed to the Nuragic civilisation of Sardinia.[583]

4.7.5.8 Subtype 5V.h: Triple coil cylinder spacer (11 units)

Description: These spacer beads have three individual coiled cylinders lightly fused together (similar to Beck Type XVII.A.2.a); several of these beads have come apart.

Chronology: These beads date to Late Cypriote IIC.

Material: Subtype 5V.h is made of gold.

[572] Golani 1996, p. 75.
[573] Åström, L. 1972, pp. 490–491.
[574] Maxwell-Hyslop 1971, p. 20, pl. 15a.
[575] Additionally, this comes from seventh century BCE Philistine levels in Stratum Ib at Ekron: Golani 1996, fig. 16:2.
[576] Peillon 1972, pl. 3:562.
[577] Refer to Golani 2013, pp. 187–188, Type I.2.
[578] Özgüç 1983, p. 35, pl. 13b. See also beads from Ziwiye: Maxwell-Hyslop 1971, p. 207, pl. 163.
[579] Golani 1996, p. 75.
[580] Bietti Sestieri and Macnamara 2007, p. 15.
[581] Popham *et al.* 1982.
[582] Popham *et al.* 1982, p. 246.
[583] Babbi 2002, fig. 2:3.

Context: At Enkomi, a necklace from Tomb 18 includes 11 examples (no. 1829; **Fig. 50:V.h**) alternating with 10 large spacer beads of the figure-of-eight shield subtype (Subtype 5VI.e).

4.7.5.9 Subtype 5V.i: Quadruple cylinder spacer (1 unit)

Description: This subtype has four individual plain cylinders fused together (like Subtype 5V.h, this bead is similar to Beck Type XVII.A.2.a).

Chronology: This bead dates to Late Helladic IIIB–C.

Material: Subtype 5V.i is made of gold.

Context: A single example comes from Perati (no. 1737.135).

4.7.6 TYPE 5VI: RELIEF BEADS

4.7.6.1 Subtype 5VI.a: Cowrie spacer (14 units)

Description: Circular spacer beads in the shape of a cowrie shell have two embossed halves of sheet-metal soldered or fused together, resulting in a lentoid section; these can have an incised border and central *en pointillé* line. Like most spacer beads, these have four perforations (two at either side) for double stringing, and are specifically intended to hold in place two or more rows of other beads. Some of these relief beads may have originally had an inner core of sand to hold the shape of the stamped sheet gold and to add weight.[584]

Chronology: This subtype dates to Late Cypriote II–III.

Material: These beads are all made of gold.

Context: These examples come from Tombs 19 and 40 at Enkomi (nos. 1835, 1915, 1970; **Fig. 50:VI.a**).[585] New Kingdom examples from Egypt include those from Lahun.[586]

Discussion: Cowrie beads have a tradition of use that dates back to Middle Kingdom Egypt.[587] Their primary association is with women, children and some animals, and a probable symbolic likeness to the vulva; as cowrie shells often represent an organism leaving the shell, they are associated with birth, rebirth, and the afterlife.[588] According to Petrie, this signifies their use as protective amulets against the evil eye and witchery.[589] A stylised version of the cowrie relief bead is the semi-circular 'wallet' bead (Subtype 5VI.h).

[584] Refer to Popham and Catling 1974, p. 213.
[585] For additional examples, see Åström, L. 1972, p. 506.
[586] Aldred 1971, pl. 22.
[587] Refer to Section 6.2.2.4.
[588] Reese 1991, p. 189.
[589] Petrie 1914, p. 27. Several authors have discussed the symbolic function of cowries at length, e.g., Aldred 1971, pp. 15–16; Andrews 1990; 1994, p. 42; Golani 2010, pp. 328–330; 2013, pp. 71, 75, 78, 84, 176–177; Reese 1986, pp. 64–65; 1991, pp. 188–189.

4.7.6.2 Subtype 5VI.b: Date or wheat (31 units)

Description: Date beads have two embossed halves of sheet-metal soldered or fused together. These beads can have embossed ribs and an elliptical section, or be four-sided with embossed lines on either side of the object's four carinations, thus having more of a rectangular section; the embossed lines are sometimes decorated *en pointillé*. In some cases, the perforations have wire collars. The literature also refers to date beads as wheat, seed, gourd, or amygdaloid beads.

Chronology: This subtype dates to Iron Age I in the Levant, to Late Helladic IIIB–C in the Aegean, and to Late Cypriote IIC–III in Cyprus.

Material: This bead is made of gold.

Context: In this dataset, Subtype 5VI.b comes from Cisjordan at Megiddo (no. 774), and in Cyprus, it comes from Enkomi (nos. 914, 1950, 1971), Maroni (no. 2365), and Pyla-*Kokkinokremos* (no. 2386). In the Aegean, a single example comes from Perati (no. 1737.062).[590] In Cyprus, this subtype also comes from Kition,[591] Hala Sultan Tekke,[592] and Kouklia.[593]

Discussion: This common bead is perhaps derived from the tradition of using real seeds as beads.[594]

4.7.6.3 Subtype 5VI.c: Dome (2 units)

Description: A rare variant of the cowrie or wallet bead is a sheet-metal spacer bead in the shape of a plano-convex dome. This dome has pronounced narrow ribs along its length, and a granulated border. Each of the four perforations has a gold wire collar.

Chronology: This bead dates to Late Cypriote IIC.

Material: Subtype 5VI.c is of gold.

Context: The only known examples were within the gold hoard from Pyla-*Kokkinokremos* (no. 2387; **Fig. 50:VI.c**).

4.7.6.4 Subtype 5VI.d: Double argonaut (33 units)

Description: Argonaut and double argonaut relief beads are associated with Minoan sea imagery.[595] The bead has two embossed halves of sheet-metal soldered or fused together, resulting in a lentoid section. The finished object depicts a conch shell in side view embossed

[590] See also Xenaki-Sakellariou 1985, pls. 40:2378, 69:2822, 79:2811, 92:3036, 114:3146, and 133:4554. Additional examples come from Tholos III Epano Englianos: Blegen *et al.* 1973, pl. 172:14.
[591] Karageorghis *et al.* 1976, p. 90, pl. 186:2510.
[592] Åström *et al.* 1983, p. 94, fig. 268.
[593] For comments on Aspoyi Tomb VII:13–14, refer to Catling 1996b, p. 535. Further examples are available in Åström, L. 1972, p. 521, no. 3, fig. 70.11–12.
[594] Hughes-Brock 1999, pp. 288–289.
[595] Hughes-Brock 1999, p. 288.

with radiating lines; protruding tentacles bow backwards along the curve of the shell and end in a forward curved spiral, and are often decorated *en pointillé*. Double argonauts (Higgins Type 9) present a mirror image of the argonaut.

Chronology: These beads date to Late Minoan IIIA.

Material: This subtype is made only of gold.

Context: At Sellopoulo, Tomb 4 yielded 33 examples in two different sizes, some with two sets of thread holes and others with three (no. 1745; **Fig. 50:VI.d**).[596] This bead is familiar from other Aegean contexts, such as Mycenae, Argos, and Dendra.[597] This subtype frequently appears in bead moulds.[598]

4.7.6.5 Subtype 5VI.e: Figure-of-eight shield (13 units)

Description: This spacer bead is in the shape of a figure-of-eight shield made of two embossed halves of sheet-metal soldered or fused together, resulting in a lentoid section (Higgins Type 28). These spacer beads have a narrow waist with an incised border often detailed *en pointillé*. Each bead has two perforations at either side with wire collars.

Chronology: These beads date to Late Cypriote IIC. In the Aegean, early versions of this subtype appear in stone from the Middle Minoan period and in metal from Late Helladic I, and continue through to Late Minoan IIIC and Late Helladic III.[599]

Material: This subtype is made of gold.

Context: Subtype 5VI.e comes from Tomb 18 at Enkomi (no. 1828; **Fig. 50:VI.e**) and the gold hoard from Pyla-*Kokkinokremos* (no. 2379). In Aegean contexts, this bead comes from Mycenae, Prosymna, Pylos, and Archanes.[600] A mould for casting glass versions of this bead comes from Knossos.[601] Another jewellery mould that includes a figure-of-eight bead with dotted decoration comes from Fakhariyah in Syria.[602]

Discussion: In the Aegean, representations of these shields also occur on weapons, seals, and wall paintings.[603] Some scholars interpret these shields (as well as other motifs such as bucrania and double axes that they can be found in association with) as religious or ritual symbols.[604] Rehak suggests the figure-of-eight shield might have had an amuletic function, possibly as a symbol associated with the cult of a Mycenaean war goddess.[605]

[596] These are amongst a large collection of beads from necklace J2: Popham and Catling 1974, p. 213. Cf. Zafer Papoura T.7 and T.36: Evans 1906, figs. 20 and 60; Kalyvia: Savignoni 1904, p. 595, fig. 58, pl. 39; Mycenae: Savignoni 1904, fig. 59. Also see Higgins 1980a, p. 79, pl. 11b.
[597] Higgins 1980a, p. 80.
[598] Velsink 2011, p. 310.
[599] For bibliography, see Velsink 2011, p. 114.
[600] Higgins 1980a, p. 82.
[601] Higgins 1980a.
[602] Vermeule 1967, fig. 4.
[603] Velsink 2011, p. 114.
[604] Marinatos 1986, pp. 51–72; Rehak and Younger 2001, pp. 437–438.
[605] Rehak 1999, p. 236.

4.7.6.6 Subtype 5VI.f: Ivy (38 units)

Description: The ivy leaf bead (Higgins Type 22) is a symmetrical heart-shaped spacer made of two embossed halves of sheet-metal soldered or fused together, resulting in a lentoid section. Variations of this bead have different levels of relief detailing.

Chronology: These beads date to Late Minoan IIIA.

Material: This subtype is made of gold.

Context: Necklace J9 from Sellopoulo (no. 1746; **Fig. 50:VI.f**) is comprised of 38 ivy leaf beads.[606] In the Aegean, this subtype also comes from Mycenae and Gournes.[607]

Discussion: The stylised ivy leaf can in fact be associated with several different plants, possibly having some ritual connection to women, fertility, or the afterlife.[608] This motif also appears on vase paintings.[609]

4.7.6.7 Subtype 5VI.g: Shell (27 units)

Description: Cockle shells (Higgins Type 11 and 19) join the argonaut and other marine creatures in the Aegean repertoire of sea imagery. As with most other relief beads, this is a bead made of two embossed halves of sheet-metal soldered or fused together, resulting in a lentoid section.

Chronology: These beads date to Late Minoan IIIA.

Material: All examples are made of gold.

Context: Tomb 4 at Sellopoulo yielded 54 examples (no. 1747; **Fig. 50:VI.g**). Additional Aegean examples include those from Mycenae and Menidi.[610] A mould for casting glass versions of this bead comes from Knossos.[611]

Discussion: The subtype may have derived from the papyrus, a motif that originated in Egypt.[612]

4.7.6.8 Subtype 5VI.h: Wallet (22 units)

Description: The wallet is a stylised cowrie shell (Beck Type XXIX.A.7/Higgins Type 25) made of two embossed halves of sheet-metal soldered or fused together, resulting in a lentoid section. This semi-circular bead often has a single or double embossed border that can be decorated *en pointillé*, suggestive of the stitching on a leather purse.[613]

[606] Popham and Catling 1974, fig. 11e, pl. 35b. For parallels, see Higgins 1980a, p. 80.
[607] Higgins 1980a, p. 82.
[608] For bibliography, see Hughes-Brock 1999, p. 288.
[609] Higgins 1980a, p. 80.
[610] Higgins 1980a, p. 81.
[611] Higgins 1980a.
[612] See Higgins 1980a, p. 80, no. 19. Cf. Zafer Papoura T.75: Evans 1906, fig. 85; Kalyvia: Savignoni 1904, p. 596, figs. 12–13; Archanes Tholos A: Sakellarakis 1970, p. 153.
[613] Hughes-Brock 2014, p. 106.

Chronology: This bead dates to Late Cypriote IIC.

Material: Subtype 5VI.h is made of gold.

Context: The examples in this dataset are limited to those from Enkomi (no. 2150; **Fig. 50:VI.h**),[614] but in Cyprus, this subtype also comes from Kourion, and in the Aegean, it comes from Mycenae, the Argive Heraeum, and Dendra.[615] A mould for casting glass versions of this bead comes from Mycenae.[616]

Discussion: The wallet bead perhaps drew its inspiration from Egypt; the bead may be a stylised cowrie whose associations with females and birth are discussed above.[617] In New Kingdom Egypt, girdles of the XVIIIth Dynasty sometimes include strings of wallet beads.[618] In the Aegean, the wallet bead is associated with the fenestrated ax, an object considered an object of authority that originated in the Levant and Egypt.[619]

4.7.7 Type 5VII: Other

4.7.7.1 Subtype 5VII.a: Cap (27 units)

Description: These circular or elliptical sheet-metal objects cap either end of stone, vitreous, or metal beads, although occasionally they occur on their own. Usually, the caps fit over the ends of cylindrical or barrel-shaped beads, and can be plain, stepped, or decorated with twisted wire, often with wire collars soldered around the perforations.

Chronology: In this dataset, this subtype dates to Late Helladic IIIB–C and Late Cypriote II–III.

Material: Subtype 5VII.a is made of gold.

Context: Capped beads are common in Cyprus, and come from Enkomi (no. 1916), Hala Sultan Tekke (nos. 2187, 2195, 2202, 2218, 2226–2228, 2231–2341, 2343–2344; **Fig. 50:VII.a**), and Maroni (no. 2373). Two examples also come from Perati in the Aegean (nos. 1737.010 and 1737.012).

4.7.7.2 Subtype 5VII.b: Conical (1 unit)

Description: This is an unusual conical-shaped bead or cap.

Chronology: This subtype dates to Iron Age I.

Material: The single example in the dataset is made of gold.

Context: This bead comes from Tomb 60 at Beth Shean in Cisjordan (no. 196).

[614] Cf. Enkomi Tomb 69: Marshall 1911, pl. 4:579. For additional Aegean examples, see Higgins 1980a, p. 81.
[615] Higgins 1980a, p. 82.
[616] Higgins 1980a.
[617] Hughes-Brock 1999, pp. 287–288; Hughes-Brock 2014, pp. 106–107.
[618] E.g., Petrie 1909, p. 9, pl. 29; Aldred 1971, pl. 35; Wilkinson 1971, pl. 47.b.
[619] Maran 2015; Hughes-Brock 2014, pp. 107–110.

4.7.7.3 Subtype 5VII.c: Lozenge (1 unit)

Description: This hollow sheet-metal bead is made of two diamond or lozenge-shaped halves soldered together.

Chronology: This bead dates to Late Cypriote II–III.

Material: Subtype 5VII.c is made of gold.

Context: This rare bead comes from Tomb 67 at Enkomi (no. 2092; **Fig. 50:VII.c**).

4.7.7.4 Subtype 5VII.d: Oblong (4 units)

Description: This plain sheet-metal bead has an oblong shape with a rectangular section that is somewhat similar to that of date beads (Subtype 5VI.b).

Chronology: This subtype dates to Late Cypriote II–III.

Material: This bead is made of gold.

Context: Subtype 5VII.d comes only from Tomb 67 at Enkomi (no. 2091; **Fig. 50:VII.d**).

4.7.7.5 Subtype 5VII.e: Mount (Scarab Bead) (1 unit)

Description: Vitreous or stone scarabs with a longitudinal perforation can sit within sheet-metal mounts (or settings). These mounts can have a decorative border of twisted wire and wire collars around the perforations.

Chronology: In Cyprus, these mounts date to Late Cypriote III. In Egypt, mounted scarabs first appear in the Middle Kingdom, and they were popular in the Levant from the Late Bronze Age (refer to section 3.4.3).

Material: Examples in this dataset are made of gold.

Context: This subtype comes from Tomb 23 at Hala Sultan Tekke (no. 2229; **Fig. 50:VII.e**). The scarab inset has an inscription with the name of Ramses II, one of the few royal names inscribed on a scarab from Cyprus.[620]

Discussion: Most mounted scarabs are in fact elements of Egyptian-inspired bezel rings (Subtype 5III.d). In the case of no. 2229, its association with beads suggests that the object was a component of a bracelet; this wearing of seals at the wrist reflects adornment traditions depicted in Aegean frescoes.[621]

4.7.7.6 Subtype 5VII.f: Wire (3 units)

Description: These ornate beads are typically made of two wire hemispheres soldered together (Beck Type XXIV.A.I.a). Beads made of openwork filigree, or *à jour*, have no additional support or structure.

[620] Steel 2013, p. 199.
[621] For references and additional discussion, refer to Verduci and Davis 2015.

Chronology: This bead dates to Iron Age I.

Material: Subtype 5VII.f is made of gold.

Context: One example comes from Stratum VIIA at Megiddo (no. 778; **Fig. 50:VII.f**).

Discussion: Openwork filigree is extremely rare in the Levant during the Iron Age. However, applied wire decorates mounts and ring bezels throughout the Aegean and Cyprus in the Late Bronze Age, and decorates earrings such as those from the Tawilan hoard dated to Iron Age IIA.[622]

4.8 CATEGORY 6: GARMENT FASTENERS TYPOLOGY

This category includes items used for holding together shrouds or elements of clothing, such as dresses, tunics, or cloaks. These items are usually visible and function as both durable fasteners and ornamentation; thus, fasteners are included as items of jewellery in this dataset. Garment fasteners are divided into three types: (1) perforated or looped *toggle pins*; (2) imperforated *dress pins*; and (3) *fibulae*. As these types represent three very different forms of clothing attachment, additional subdivisions are required for variations in style. Type 6I toggle pins and Type 6II dress pins are typically cast metal rods that are plain, have decorative ribs or mouldings, or have incised designs. Type 6I pins have an eyelet to which a thread is attached; after the pin is inserted into the fabric, this thread is wound around the pin shaft to secure it in place. Type 6II pins have mouldings and head shapes that hold the object securely in the fabric. Type 6III fibulae are an ancient form of safety pin. These can be made of wire with a pin and bow connected by a coiled spring, or they can be cast in two pieces so that the pin is detachable.

4.8.1 Type 6I: Toggle Pin

4.8.1.1 Subtype 6I.a: Simple

4.8.1.1.1 *6I.a.i: Hollow pin (3 units)*

Description: This toggle pin of rolled sheet-metal has a hammered end and a perforated eyelet. Despite being made of luxury materials, the artisanship of this subtype is unskilful (Henschel-Simon Type III.A.10). For all toggle pins, the 'head' is the larger side at the top of the pin, the 'shaft' is the main body, the 'end' is the tapered point, and the 'eyelet' widens and has a perforation. Toggle pins thread through fabric, with a string attached to the eyelet that winds around the upper shaft of the pin to secure the object in place.

Chronology: In this dataset, examples date to Iron Age I in the southern Levant and to Late Cypriote II–III in Cyprus.

[622] Ogden 1995, figs. 8:3–4 and 8:14–15.

Material: Subtype 6I.a.i is made of gold or silver.

Context: Tomb 62 at Megiddo contained two examples (nos. 846–847; **Fig. 51:I.a**) and Tomb 66 at Enkomi contained another (no. 2088). The latter example, with its upper shaft decoratively ribbed, is more complex than examples from Cisjordan.[623]

4.8.1.1.2 *6I.a.ii: Plain stake (25 units)*

Description: This solid and plain toggle pin has a wide head and tapered shaft with an eyelet near the middle or lower half of the pin (Henschel-Simon Type III.A.11).

Chronology: This common pin dates to the Late Bronze Age–Iron Age IIA and possibly to the transition from the Late Bronze Age to the Early Iron Age.[624]

Materials: This subtype is made of copper alloy.

Context: This pin is common in tombs at Far'ah and Nasbeh in Cisjordan. It also comes from Stratum VI at Ekron in Philistia (no. 104), and from burials at Sahab (no. 1276), Madaba (nos. 1171–1172, 1174–1175), and the Baq'ah Valley (nos. 1111–1112) in Transjordan. While examples appear quite regularly in the southern Levant, very few appear in Cyprus.[625]

Discussion: The original field notes from Nasbeh referred to this pin as a weaving shuttle.[626] Thus, all pins classified as shuttles might require reassessment.

4.8.1.1.3 *6I.a.iii: Club (1 units)*

Description: Solid club-shaped toggle pins are short and tapered with a rounded head (Henschel-Simon Type I.2).

Chronology: This pin occurs in Late Bronze Age–Iron Age I contexts.

Material: This subtype is made of silver.

Context: One example comes from Tomb 934 at Far'ah (no. 268; **Fig. 51:I.a.iii**).

4.8.1.1.4 *6I.a.iv: Without head and plain (4 units)*

Description: The shaft of this solid toggle pin has a cylindrical top half with a wide central eyelet, below which is a tapered end (Henschel-Simon Type II.A.3).

Chronology: In this dataset, this pin dates from Iron Age I–IIA in the southern Levant and from Late Cypriote II–III in Cyprus.

Material: Subtype 6I.a.iv is made of copper alloy or gold.

[623] Marshall 1911, p. 572; Crewe *et al.* 2009, no. 66.139; Goring 1983, no. 591.
[624] Henschel-Simon 1937, p. 175.
[625] Åström, L. 1972, p. 488.
[626] The Badè Museum at the Pacific School of Religion, Berkeley holds the hand-written notes (dated 18 May 1932).

Context: This subtype comes from *Philistine* Tomb 562 at Far'ah (no. 453; **Fig. 51:I.a.iv**), Megiddo (no. 856), the Baq'ah Valley (no. 1108), and Enkomi (no. 2064).

4.8.1.1.5 *6I.a.v: Flat head and plain (1 unit)*

Description: This toggle pin has a flat and wide head and an eyelet positioned close to the end (Henschel-Simon Type II.B.8a).

Chronology: This subtype dates to Iron Age I.

Materials: This toggle pin is made of copper alloy.

Context: This dataset includes one example from Stratum XIIb at Ashdod (no. 3; **Fig. 51:I.a.v**).

4.8.1.1.6 *6I.a.vii: Knob head and plain (2 units)*

Description: This toggle pin has a high and rounded head, and sometimes has incised rings on the shaft (Henschel-Simon Type II.B.9a).

Chronology: This subtype dates to Iron Age I.

Materials: This pin is made of copper alloy.

Context: This dataset includes one example from Tomb 843 at Far'ah (no. 534; **Fig. 51:I.a.vii**) and another from Stratum VIA at Megiddo (no. 801).

4.8.1.1.7 *6I.a.viii: Loop head and plain (2 units)*

Description: This pin does not have an eyelet; the head of the pin instead coils to create a loop.

Chronology: This subtype dates to Iron Age I.

Material: Subtype 6I.a.viii is made of copper alloy.

Context: Two examples come from Stratum VI at Megiddo (nos. 804 and 814; **Fig. 52:I.a.viii**).

4.8.1.2 Subtype 6I.b: Decorative

4.8.1.2.1 *6I.b.i: Without head and ribbed with rhythmical change (5 units)*

Description: The shaft of this pin has deeply incised or moulded rings that form ribs in groups of two or three (Henschel-Simon Type II.A.6b).

Chronology: This subtype dates to Late Bronze Age–Iron Age IIA in the southern Levant and Late Cypriote II–III in Cyprus.

Material: Subtype 6I.b.i is made of copper alloy in the Levant, and gold or silver in Cyprus.

Context: This pin comes from burial contexts at Far'ah (no. 243), Nasbeh (nos. 943 and 973; **Fig. 52:I.b.i**), Sahab (no. 1297), and Maroni (no. 2346).

4.8.1.2.2 *6I.b.ii: Flat head and ribbed with rhythmical change (1 unit)*

Description: This toggle pin is similar to Subtype 6I.b.i but it has a wide and flat nail head, and the shaft has repetitive sets of ribs.

Chronology: This pin dates to Iron Age I in the southern Levant.

Material: This subtype is made of copper alloy.

Context: This dataset includes one example from Cave A4 in the Baq'ah Valley (no. 1109; **Fig. 52:I.b.ii**).

4.8.1.2.3 *6I.b.iii: Mushroom head and ribbed regularly (1 unit)*

Description: This toggle pin has a rounded head and evenly spaced ribs, and it occasionally has decorative incised lines. The literature sometimes refers to this subtype as 'baluster shaped' (Henschel-Simon Type III.B.13).

Chronology: This pin dates to the Late Bronze Age–Iron Age IIA in Transjordan, but in general, it is rare in Early Iron Age contexts.

Material: One example is made of copper alloy.

Context: This pin is limited to Tomb C at Sahab (no. 1296; **Fig. 52:I.b.iii**).

4.8.1.2.4 *6I.b.iv: Mushroom head and ribbed with rhythmical change (10 units)*

Description: This toggle pin has repetitive sets of ribs, and a shank topped by a wide and rounded head (a variation of Henschel-Simon Type III.B.13).

Chronology: This subtype occurs in Late Bronze Age–Iron Age IIA contexts.

Material: This pin is made only of copper alloy.

Context: This Levantine subtype comes from Ekron (no. 107), Taiyiba (nos. 756 and 762; **Fig. 52:I.b.iv**), Nasbeh (nos. 912, 974), Madaba (nos. 1163, 1167, 1173), Sahab (no. 1226), and Sa'idiyeh (no. 1339).

4.8.1.2.5 *6I.b.v: Rib-and-reel (8 units)*

Description: This toggle pin has alternating discs and moulded ribs with a short tapered point (a variation of Henschel-Simon Type II.B.8cβ). In the case of Cypriote models, radial or vertical incised lines sometimes decorate the ribs (Henschel-Simon Type II.B.8cβ).

Chronology: This subtype dates to the Iron Age I–IIA and Late Cypriote II–III.

Materials: Subtype 6I.b.v is made of copper alloy in the Levant and of silver in Cyprus.

Context: This pin comes from burials at Far'ah (no. 287) and Nasbeh (nos. 937 and 955). In Cyprus, it comes from Maroni (nos. 2345 and 2355; **Fig. 52:I.b.v**) and from Enkomi (nos. 1998 and 2100).

Discussion: Pins with rib and disc shanks are comparable to Late Bronze Age examples from 'Ajjul;[627] one striking gold pin is the earliest example of this subtype.[628] A mould for this subtype also comes from Beth Shemesh.[629]

4.8.1.2.6 *6I.b.vi: Stake-shaped and incised (29 units)*

Description: This toggle pin has a solid and tapered shaft with incised chevrons (or herringbones) and rings around the head and near the eyelet (Henschel-Simon Type III.A.11).

Chronology: This subtype dates to the Late Bronze Age–Iron Age IIA.

Material: This pin is usually of copper alloy, but occasionally of electrum.

Context: Subtype 6I.b.vi is common throughout the southern Levant. Although this pin comes from Beth Shean (no. 174) and 'Eitun (no. 223), its popularity is greatest in northern Cisjordan, at sites such as Taiyiba and Nasbeh.[630] In Transjordan, this pin also comes from the Baq'ah Valley (no. 989), Sahab (no. 1275), and Sa'idiyeh (nos. 1329 and 1330).

Discussion: Henschel-Simon claimed this toggle pin was of Caucasian origin and unknown in the southern Levant before the appearance of the Hyskos (who arrived from the north during the Late Bronze Age).[631] One can compare the chevron motif on these pins to the motif on wine sets from Tomb 32 and from Tomb 101 at Sa'idiyeh.[632]

4.8.1.2.7 *6I.b.vii: Flat head and incised (2 units)*

Description: This uncommon toggle pin has a flat or slightly domed nail head and incised decorations on the shank (Henschel-Simon Type II.B.8b).

Chronology: This pin typically dates to Middle Bronze Age–Late Bronze Age, although one example from Beth Shean was found in an Iron Age I context.[633] In Cyprus, this pin dates to the Late Cypriote period.

[627] Petrie 1932, pl. 3:13; 1934, pls. 14:20–24, 15, 16:57, 17, 18:121, 19, 20:138, and 22:251.
[628] Barnett 1951, p. 78, pl. 28:22.
[629] Henschel-Simon 1937, pl. 70.
[630] Cf. examples from Khirbet Nisya: Livingstone 2002, p. 23, fig. 7:1–8.
[631] Henschel-Simon 1937, p. 176.
[632] Green 2006, p. 421.
[633] This object has also been compared to Henschel-Simon Type 6: Thompson 2009, p. 607.

Materials: Subtype 6I.b.vii is made of gold or silver. Lead isotope analysis of a fragment from a silver hoard from Beth Shean indicates Anatolian and Aegean origins for the silver.[634]

Context: This dataset includes examples from Beth Shean (no. 135; **Fig. 53:I.b.vii**) and Enkomi (no. 2149).

4.8.1.2.8 *6I.b.viii: Mushroom head and incised (3 units)*

Description: This toggle pin is similar to Subtype 6I.b.vii, but the head is rounded rather than flat (a variation of Henschel-Simon Type III.A.12).

Chronology: This subtype dates to Iron Age I.

Material: Examples in this dataset are made only of copper alloy.

Context: This uncommon pin comes from Far'ah (no. 535; **Fig. 53:I.b.viii**), Megiddo (no. 803), and Madaba (no. 1170).

4.8.1.2.9 *6I.b.ix: Without head and incised (4 units)*

Description: The shaft of this pin has decorative incised rings or lines and widens at the centre for its pierced eyelet (Henschel-Simon Type II.A.5).

Chronology: In this dataset, examples from the southern Levant date to Iron Age I, but they are more common in Middle Bronze Age II.[635] In Cyprus, examples date to Late Cypriote.

Material: This pin is of copper alloy in Cisjordan and of gold in Cyprus.

Context: This subtype is unusual and comes only from Megiddo (no. 840; **Fig. 53:I.b.ix**) and Enkomi (nos. 1783, 1865 and 1866).

4.8.1.2.10 *6I.b.x: With attached bead (6 units)*

Description: These ornate toggle pins display various methods of construction, but they all feature a decorative bead attached to the head (Henschel-Simon Type II.B.9c). In one variety of this subtype (such as nos. 1820 and 1920; **Fig. 53:I.b.x**), the eyelet is a ring attached to the shank by means of wire loops. The pin has a circular point and a square shank made of gold that is overlaid with pairs of twisted wire on each of its four sides to create a plaited effect.[636] Attached to the end of the shank is a faience melon or fluted bead, above which is sometimes another sheet-metal melon bead.[637] Another variety of this subtype has a ribbed and incised shank completed with a fluted faience bead (nos. 1867, 1921, 2099), or in one case, has a seven-petalled flower that attaches to the head with a gold cap (no. 1864).

[634] Thompson 2009, p. 606.
[635] Henschel-Simon 1937, p. 173.
[636] Regarding *loop-in-loop* chain decoration, see Åström, L. 1972, p. 500, fn. 1.
[637] Goring 1983, p. 187.

Chronology: These pins date to Late Cypriote II–III.

Material: This decorative subtype is made only of gold.

Context: Several examples in this dataset come from burial contexts at Enkomi.[638]

4.8.1.3 Subtype 6I.c: Unusual Shapes

4.8.1.3.1 *6I.c.i: Lozenge section (1 unit)*

Description: This unusual pin has a tapered shaft, diamond-shaped section, and eyelet close to the end (Henschel-Simon Type I4).

Chronology: One example dates to Iron Age I.

Material: This pin is made of copper alloy.

Context: In this dataset, Subtype 6I.c.i comes only from Tomb A at Madaba (no. 1165; **Fig. 53:I.c.i**), although it apparently also comes from Far'ah[639] and from Nasbeh.[640]

4.8.1.3.2 *6I.c.ii: Square section (2 units)*

Description: Like Subtype 6I.c.i, pins with a square section are unusual (Henschel-Simon Type I4b).

Chronology: Subtype 6I.c.ii predominantly dates to the Iron Age I period.[641]

Material: This pin is made of copper alloy.

Context: This dataset includes examples from Far'ah (no. 565; **Fig. 53:I.c.ii**) and Megiddo (no. 805).

4.8.1.4 *Subtype 6I.d: Indefinable shapes and fragments (25 units)*

Description: These fragments have either circular or square sections, but their complete shape is unknown.

Chronology: These fragments date to Late Bronze Age–Iron Age IIA.

Material: In most cases, these toggle pins are made of copper alloy, but one example is of silver (no. 810).

Context: The fragments included in this dataset come from settlement and burial contexts at many sites in the southern Levant, most in Transjordan.

[638] Cf. the plaited pin with a faience bead from Enkomi Tomb 92: Marshall 1911, pl. 4:549–550.
[639] Petrie 1930, pl. 48:552.
[640] McCown 1947, p. 268.
[641] See Laemmel 2003, p. 56.

4.8.2 Type 6II: Dress Pin

4.8.2.1 Subtype 6II.a: Simple

4.8.2.1.1 *6II.a.ii: Hook (2 units)*

Description: This dress pin has a circular section with its curved hook flattened. Blinkenberg describes this subtype as 'une simple epingle repliée.'[642]

Chronology: In Cyprus, this subtype dates to Late Cypriote II–III, and in the Aegean, it dates from early in the second millennium into the Late Bronze Age.

Material: In this dataset, this pin is made of gold, but other examples are of silver, bronze, glass, or (possibly) ivory.[643]

Context: This dataset includes two pins from Tomb 19 at Enkomi (nos. 1862 and 1868; **Fig. 54:II.a.ii**).

Discussion: The hook pin is included in this dataset as a dress pin despite some debate about its true function. Blinkenberg[644] and Higgins[645] both regarded Aegean hook-shaped pins as the immediate predecessor of the violin-bow fibula — that is, as clothing attachments. Nevertheless, such pins are possibly hairpins rather than clothing attachments as their context, where known, is usually associated with females, while the pins are found positioned near the head.[646] Many authors are now of the opinion that hooked pins would have been required for the elaborate hair arrangements seen in the Middle Minoan III–Late Minoan I Aegean;[647] the Piskokephalo head is one such example of a raised hairstyle that probably required the use of pins.[648] Some of these pins also have short Linear A inscriptions that might demonstrate ownership or express status.[649]

4.8.2.1.2 *6II.a.iii: Pin with pierced barrel head (2 units)*

Description: This metal pin has a cylindrical-shaped head perpendicular to the shaft. The head extends from the shaft, broadens, and then rolls forward to create a cylinder. The cylinder no doubt functioned in the same manner as the loop on Subtype 6I.a.viii.

[642] Blinkenberg 1926, p. 40, fig. 5.

[643] E.g., silver: Hutchinson 1956, p. 68, fig. 3, no. 24; gold: Evans 1906, p. 151, fig. 129. For other materials, refer to Verduci and Davis 2015.

[644] Blinkenberg 1926, p. 40.

[645] Higgins 1980a, p. 85.

[646] For discussion and bibliography, see Verduci and Davis 2015.

[647] Evans 1906, p. 151; Hastings 1905, pp. 278–279, pl. 10; Forsdyke 1926–1927, p. 289; Evans 1906, p. 151; Jacobstahl 1956, p. 91; Higgins 1980a, pp. 61, 72; Hood 1971, p. 102, fig. 76; Alexiou and Brice 1972, pp. 113–115; Vagnetti 1972, pp. 364–371; Papaeuthimiou-Papanthimou 1979, pp. 208–213; Dimopoulou-Rethemiotaki *et al.* 1978, p. 104; Kilian-Dirlmeier 1984, p. 53; Konstantinidi 2001, pp. 25–26. For in depth discussion, see Verduci and Davis 2015.

[648] Platon 1951, pp. 134–135, pl. H1; Alexiou 1975, fig. 2.

[649] E.g., KN ZF 31 from Mavrospilio: Forsdyke 1926–1927, fig. 38; Alexiou and Brice 1972, pls. 1–2; Alexiou 1975, fig. 1; Pl Zf 1 from Platanos: Alexiou and Brice 1976; and perhaps Cr (?) Zf 1 from Crete: Olivier *et al.* 1981, p. 3.

Chronology: This pin dates to the Protogeometric.

Material: Subtype 6II.a.iii is made of iron.

Context: This pin comes from Tombs III and VI at Marmáriane (nos. 1728 and 1732; **Fig. 54:II.a.iii**).[650]

Discussion: Although I classify this subtype as a dress pin in this dataset, its function remains obscure.

4.8.2.1.3 *6II.a.iv: Without head and elliptical swelling on upper shaft (2 units)*

Description: This dress pin is cast in one piece, and has a round section with an elliptical swelling on the upper shank, but it does not have a distinct head (Vagnetti Type XIVA).

Chronology: This subtype dates from the Subminoan in Crete and from the Submycenaean on the Greek mainland.

Material: Subtype 6II.a.iv is made of copper alloy.

Context: Examples come from Kerameikos (no. 1538; **Fig. 54:II.a.iv**) and from Knossos (no. 1612).

4.8.2.1.4 *6II.a.v: With head and spherical swelling on upper shaft (12 units)*

Description: This simple dress pin has a circular section and a nail head above a globular swelling (Vagnetti Type XVII).

Chronology: This subtype dates to Submycenaean and Early Protogeometric contexts in Greece, but in Crete, it dates from the Late Protogeometric onwards.[651]

Material: This pin is made of copper alloy or iron.

Context: All examples in this dataset come from burial contexts at Lefkandi.

4.8.2.1.5 *6II.a.vi: With head and two spherical swellings on upper shaft (1 unit)*

Description: This dress pin has a circular section and a nail head above two moulded globular swellings.

Chronology: This subtype dates to the Early Protogeometric in the Aegean.

Material: A single example is made of silver-coated bronze.

Context: This dataset includes one example from the Knossos North Cemetery (no. 1631; **Fig. 54:II.a.vi**).

[650] Similar iron pins come from Theotókou, Tiryns, and Athens: refer to Heurtley and Skeat 1930–1931, p. 36, fn. 3.
[651] Catling 1996a, p. 555.

4.8.2.2 Subtype 6II.b: Decorative

4.8.2.2.1 *6II.b.i: Without head and biconical bead on upper shaft (1 unit)*

Description: This dress pin has no head, but rather it has a biconical bead threaded onto the upper shaft.

Chronology: This subtype dates to Submycenaean in the Aegean.

Material: This pin is made of copper alloy.

Context: One example in this dataset comes from Kerameikos (no. 1496; **Fig. 54:II.b.i**).

4.8.2.2.2 *6II.b.ii: Without head and twisted (2 units)*

Description: This is a short dress pin made from two strips of metal folded longitudinally and soldered back-to-back so that they create an X cross-section. The object is then twisted and one end hammered to create a tapered point.

Chronology: This pin dates to Late Cypriote II–III in Cyprus.

Material: Subtype 6II.b.ii is made of gold.

Context: This pin comes only from Enkomi (nos. 1863 and 1869; **Fig. 54:II.b.ii**).

Discussion: This subtype shares its method of construction with the strip-twisted earrings common in Cyprus (Subtype 1IV.d). As this pin would have been difficult to insert into fabric, it possibly once included other components.

4.8.2.2.3 *6II.b.iii: Disc head and globe on upper shaft (1 unit)*

Description: This long dress pin has a wide flat head and is threaded through a globe or bead on the upper shaft (similar to Kilian-Dirlmeier Type B1). Sometimes the shaft projects slightly above the top of the head.[652]

Chronology: This subtype dates to Early Protogeometric in the Aegean.

Material: This pin is made of iron.

Context: A single example in this dataset comes from Lefkandi (no. 1709; **Fig. 55:II.b.iii**).

4.8.2.2.4 *6II.b.iv: Disc head and bronze globe on upper shaft (4 units)*

Description: Subtype 6II.b.iv is similar to the previous pin, but is bimetallic (similar to Kilian-Dirlmeier Type B3).

Chronology: This pin dates to the Submycenaean period in the Aegean.

[652] Jacobstahl (1957, p. 5) considers this feature distinctive of Geometric pins.

Material: The shaft of this pin is made of iron and the bead is of copper alloy.

Context: Examples in this dataset come from Kerameikos (nos. 1507–1508, 1512–1513; **Fig. 55:II.b.iv**).

4.8.2.2.5 *6II.b.v: Disc head, finial, ring mouldings and small globe on upper shaft (1 unit)*

Description: This dress pin has a wide flat head with ring mouldings below it and a small globe or bead threaded on to the upper portion of the shaft.

Chronology: This subtype dates to Subminoan in the Aegean.

Material: This pin is made of copper alloy.

Context: One example comes from the Knossos North Cemetery (no. 1614).

4.8.2.2.6 *6II.b.vi: Disc head, octagonal baluster bordered by three ridges above and four below (1 unit)*

Description: This dress pin has a wide and stepped head with an octagonal moulding on the upper shaft bordered at either side by ringed mouldings.

Chronology: This pin dates to Subminoan in the Aegean.

Material: This subtype is made of silver.

Context: One example comes from the Knossos North Cemetery (no. 1613; **Fig. 55:II.b.vi**).

4.8.2.2.7 *6II.b.vii: Uncertain head type with two small superimposed biconical bosses above a succession of fine ring mouldings (1 unit)*

Description: Although the head shape of this dress pin is unknown, the upper shaft has two distinctive biconical beads threaded onto it, with a group of fine ring mouldings directly below (Catling Type 3).

Chronology: This subtype dates to Early Protogeometric.

Material: This pin is made of copper alloy.

Context: One example comes from the Knossos North Cemetery (no. 1609; **Fig. 55:II.b.vii**).

4.8.2.2.8 *6II.b.viii: Small moulded head and moulding below head (3 units)*

Description: This dress pin has a small globular moulded head with another moulding directly beneath it.[653]

Chronology: This subtype comes from a Subminoan context.

[653] Insufficient evidence exists for the origin of this pin: Catling 1996a, p. 530.

Material: This pin is made of iron.

Context: Once again, this subtype comes only from the Knossos North Cemetery (nos. 1626–1627; **Fig. 55:II.b.viii**).[654]

4.8.2.2.9 *6II.b.ix: Conical knob head resting on circular section resting on rectangular section (2 units)*

Description: First cast and then hand-finished, this dress pin has a conical head that rests on sections of circular and then rectangular mouldings on the upper shaft.

Chronology: This subtype dates to Early Protogeometric in the Aegean.

Material: This pin is made only of gold.

Context: Two examples come from the Knossos North Cemetery (nos. 1630 and 1632; **Fig. 55:II.b.ix**).[655]

4.8.2.2.10 *6II.b.x: Needle with attached bead head (1 unit)*

Description: This dress pin has a gold pomegranate-like head composed of a concave biconical bead. The bead rests on a small tube of gold that originally covered an inner core, into which a silver pin of thin sheet-metal with a slightly tapered point is inserted.

Chronology: This pin dates to Cypro Geometric II–III in this dataset, although it also dates to Cypro Geometric I at Lapithos.[656]

Material: This pin is made of both gold and silver.

Context: One example comes from Tomb 79 at Kouklia-*Skales* (no. 2328; **Fig. 55:II.b.x**).

4.8.2.3 Subtype 6II.c: Undefinable shapes and fragments (10 units)

Description: Small fragments of broken or degraded metal are identifiable as dress pins, although no further interpretation as to their original shape is possible.

Chronology: These fragments date to Late Helladic IIIC, Subminoan, and Submycenaean in the Aegean, and to Cypro Geometric II–III in Cyprus.

Material: The fragments are of copper alloy in the Aegean and of gold in Cyprus.

Context: In the Aegean, several fragments of pin shafts come from Kerameikos and from the Knossos North Cemetery, while a fragment with a sharp point and square section comes from Perati (no. 1737.092). The situation is somewhat different in Cyprus, where in two cases at Kouklia–*Skales* the head rather than the shaft is preserved (nos. 2280 and 2303).

[654] Cf. iron pins (nos. 11 and 12) from *Skoubris* T. 38 at Lefkandi: Popham *et al.* 1980, pp. 123, 246, pl. 103. Also those from Kerameikos Tombs S113, PG22 and PG23: Styrenius 1967, p. 70.
[655] Cf. Fortetsa: Brock 1957, n. 110.
[656] Gjerstad *et al.* 1934, pls. 51:5 and 180:11.

4.8.3 Type 6III: Fibula

4.8.3.1 Subtype 6III.a: Semi-circular bow

4.8.3.1.1 *6III.a.i: Plain semi-circular bow (5 units)*

Description: This subtype (also known as a violin- or fiddle-bow fibula) consists of one piece of wire of circular section (Stronach Type I.1/Pedde Group A3). One end of the wire has a hammered point, while the other end of the wire forms a single spring coil and then extends up and bows over so that it meets the pointed end of the pin. The end of the bow usually curves back on itself so that it can hook onto the pin.

Chronology: This fibula dates to Iron Age I–IIA in the southern Levant. In the Aegean, this subtype occurs from Late Helladic IIIB.[657]

Materials: This subtype is made of copper alloy.

Context: Examples in this dataset come from Philistia at Azor (no. 16; **Fig. 56:III.a.i**) and Gath (no. 52), and in Cisjordan, examples come from Megiddo (no. 794) and Nasbeh (no. 947). In the Aegean, one example comes from Perati (no. 1737.124). This fibula also comes from 10th century BCE contexts at Beit Mirsim,[658] and in Cyprus it comes from Enkomi, Kition, and Maa-Palaeokastro.[659]

Discussion: The violin fibula is one of the earliest varieties of fibulae found in the Aegean and Cyprus, but it appears in only limited numbers in the Near East.[660] From *ca.* 1000 BCE this basic shape was cast in two pieces, enabling the pin to be replaced as needed.

4.8.3.1.2 *6III.a.ii: Semi-circular bow flattened vertically (1 unit)*

Description: This is a fibula made in the same manner as Subtype 6III.a.i, but with its narrow bow flattened vertically (Blinkenberg Type II.4/Stronach Type I.1/Pedde Group A3).

Chronology: This fibula dates to the Subminoan in the Aegean.

Material: This subtype is of copper alloy.

Context: One example comes from the Knossos North Cemetery (no. 1622; **Fig. 56:III.a.ii**).

4.8.3.1.3 *6III.a.iii: Semi-circular bow flattened horizontally to form leaf (8 units)*

Description: The construction of this leaf-bow subtype is similar to that of the previous fibula; however, the wide bow is flattened horizontally rather than vertically so that it forms a leaf shape, often with *en pointillé* or *tremolo* decoration (Blinkenberg Type I.7/Stronach Type Early Minoan I–II/Pedde Group A1.1–2).

[657] Catling and Catling 1980, p. 236.
[658] Albright 1932a, p. 34, pls. 32:20 and 63:39.
[659] Giesen 2001, pp. 40–55; Karageorghis 2002, p. 93.
[660] Stronach 1959, p. 186.

Chronology: Examples in this dataset appear in Late Helladic IIIB–C and Submycenaean–Early Protogeometric contexts in the Aegean.

Material: This subtype is made of copper alloy.

Context: In the Aegean, the leaf-bow fibula comes from Kerameikos (nos. 1565 and 1566; **Fig. 56:III.a.iii**), Lefkandi (nos. 1688 and 1714). These fibulae are similar to earlier examples from Perati (nos. 1737.047, 1737.067, 1737.068, and 1737.141), but this subtype may have originated in Italy and reached the Aegean via Crete.[661]

Discussion: In the Submycenaean period, the leaf-shaped subtype replaced the wire violin-bow and it usually has increased levels of incised ornamentation.[662]

4.8.3.1.4 *6III.a.iv: Semi-circular bow twisted (12 units)*

Description: This fibula has a semi-circular bow that is twisted, perhaps to increase its tensile strength (Blinkenberg Type I.7).[663]

Chronology: Examples in this dataset date to Late Helladic IIIC and Submycenaean.[664]

Material: This fibula is made of copper alloy.

Context: In the Aegean, several examples come from burial contexts at Kerameikos and Lefkandi.[665] In the Argolid, additional examples come from Late Helladic IIIC Tomb 29 at Deiras and Tomb 74 at Perati.[666]

4.8.3.1.5 *6III.a.v: Semi-circular bow with rectangular section (1 unit)*

Description: Once again this fibula is a variation of Subtype 6III.a.i, although the wire is rectangular in section (Blinkenberg Type II.3/Stronach Type I.1/Pedde Group A3).

Chronology: This subtype dates to Early Protogeometric in the Aegean.

Material: This fibula is made of copper alloy.

Context: This dataset includes one example from Lefkandi (no. 1698; **Fig. 56:III.a.v**).

4.8.3.1.6 *6III.a.vi: Semi-circular bow with rhomboid section (19 units)*

Description: The bow of this fibula has a rhomboid or lozenge-shaped section (Blinkenberg Type II.3//Stronach Type I.1/Pedde Group A3). In some instances, decorative notches mark the bow (no. 1705).

[661] E.g., examples in Italy come from 13th–11th century BCE Scoglio del Tonno and Grotta Pertosa: Macnamara 2002, p. 153.
[662] Catling and Catling 1980, p. 236.
[663] Catling and Catling 1980, p. 235.
[664] This date contradicts Catling, who viewed the twisted arch variety as being in use only briefly: Catling and Catling 1980, p. 235.
[665] See also one fibula from Tomb 42 at Kerameikos: Mountjoy 1988.
[666] Deiras: Deshayes 1966; Perati: Iakovides 1969–1970, pl. 27b, M116, M117.

Chronology: This subtype dates to Subminoan–Early Protogeometric on Crete and to Late Helladic IIIC and Submycenaean–Early Protogeometric on the Greek mainland.

Material: Like most semi-circular fibulae, this subtype is usually made of copper alloy, although occasionally it is of iron (nos. 1621 and 1655).

Context: Examples in this dataset come from the Knossos North Cemetery, Lefkandi, and Perati.

4.8.3.1.7 *6III.a.vii: Semi-circular bow with collared beaded mouldings (3 units)*

Description: An ornate version of the semi-circular arched fibula includes decorative beaded mouldings that have narrow collars at either side (Stronach Type I.4/ Pedde Group B2.1).

Chronology: These fibulae appear in Iron Age I–IIA contexts.

Material: This subtype is made of copper alloy.

Context: In Cisjordan, examples come from Beth Shemesh (no. 208), Far'ah (no. 658), and Megiddo (no. 812; **Fig. 56:III.a.vii**).

4.8.3.1.8 *6III.a.viii: Semi-circular bow with transverse constrictions creating beads (1 unit)*

Description: This decorative fibula has constrictions along the length of the bow that create the appearance of beads (Blinkenberg Type XIII.3a/ Pedde Group B2.1).

Chronology: This subtype dates to Iron Age I in the southern Levant.

Material: This fibula is made of copper alloy.

Context: One early Iron Age example comes from the Southern Temple at Beth Shean in Cisjordan (no. 171; **Fig. 56:III.a.viii**).

4.8.3.2 Subtype 6III.b: Arched bow

4.8.3.2.1 *6III.b.i: Plain arched bow (2 units)*

Description: This subtype sees the bow increase in height to form a higher arch (Stronach Type I.1/Pedde Group A3). This arched bow precedes the triangular bow that becomes popular from the eighth century.

Chronology: This fibula dates to Iron Age I–IIA in the southern Levant.

Materials: Subtype 6III.b.i is of copper alloy.

Context: In Cisjordan, this fibula comes from Beth Shean (no. 149) and Nasbeh (no. 948; **Fig. 56:III.b.i**).

4.8.3.2.2 *6III.b.ii: Plain arched bow with large spring (22 units)*

Description: The spring coil of this fibula is oversized and the catch-plate that holds the pin at the end of the bow is often broad and flat (Blinkenberg Type II.1/Pedde Group A3).

Chronology: This fibula dates to the Subminoan on Crete and to the Submycenaean–Early Protogeometric on the Greek mainland. This corresponds with Catling's chronology for the arch-bow fibula in the Aegean.[667]

Material: In most cases, this fibula is made of copper alloy, but occasionally it is of iron (nos. 1618 and 1620).

Context: This subtype is common at Kerameikos, the Knossos North Cemetery, and Lefkandi.

4.8.3.2.3 *6III.b.iii: Arched bow and plain or block mouldings on each arm (1 unit)*

Description: This fibula has deeply incised lines encircling either end of the bow, but it can also appear with rectangular mouldings at either end of the bow (Stronach Type II.3/ Pedde Group B2.2).

Chronology: This Iron Age I example was dated to late in the reign of Ramses III by the excavator.[668]

Material: This subtype is made of copper alloy.

Context: This dataset includes one example from Beth Shean (no. 170; **Fig. 56:III.b.iii**).

4.8.3.2.4 *6III.b.iv: Arched bow and plain or collared beads on each arm (2 units)*

Description: This fibula is cast with beaded mouldings at either end of the bow (Stronach Type II.4/ Pedde Group B2.2). This style heralded increasingly angular and beaded fibulae.

Chronology: In the southern Levant, this fibula dates to Iron Age IIA. According to Stronach, this subtype dates from the early ninth century BCE, although other scholars prefer a date from the eighth century BCE.[669]

Material: This fibula is made of copper alloy.

Context: In this dataset, examples come from Megiddo (no. 863; **Fig. 56:III.b.iv**) and with incised decoration, from Nasbeh (no. 949). This subtype also comes from early first millennium Far'ah[670] and seventh century BCE Ashkelon.[671]

[667] Catling 1996a, pp. 524, 551.
[668] Rowe 1940, pl. 34:8.
[669] Stronach 1959, p. 188. Cf. Mazzoni 1992, pp. 236–238.
[670] Petrie 1930, pl. 41:295.
[671] Park 2011, p. 433, fig. 15.4:49770.

Discussion: The arched bow with beads at each end precedes the triangular bow popular from the eighth century; it is one of the most common and distinctive Iron Age II fibulae and possibly originated in the Levant.[672]

4.8.3.2.5 *6III.b.v: Arched bow with rectangular or rhomboidal section (5 units)*

Description: This fibula has a high arched bow with a square or lozenge section (Blinkenberg Type II.2).

Chronology: This subtype dates to Submycenaean–Early Protogeometric in the Aegean.

Material: Subtype 6III.b.v is made of copper alloy.

Context: In the Aegean, this subtype comes from Kerameikos (no. 1479) and Lefkandi (nos. 1696, 1699, 1700, and 1701; **Fig. 56:III.b.v**).

4.8.3.3 Subtype 6III.c: Asymmetrical arch

4.8.3.3.1 *6III.c.i: Asymmetrical bow twisted (3 units)*

Description: The asymmetrical bow of this fibula is often called D-shaped (Blinkenberg Type II.6). A section of the bow bends over from the spring (the 'spring arm'); it then straightens to meet the pin (the 'forearm'), creating an angle in the curve of the bow (the 'elbow'). In this subtype, the section between the spring and elbow is often twisted. Most asymmetrical fibulae also have a double spring coil.

Chronology: This subtype dates to Submycenaean in the Aegean.

Material: This fibula is made of copper alloy.

Context: In this dataset, examples come from Kerameikos (nos. 1567 and 1571; **Fig. 56:III.c.i**) and Lefkandi (no. 1672), although this subtype also occurs in Cyprus.[673]

4.8.3.3.2 *6III.c.ii: Asymmetrical bow with pronounced swell mimicking bead (2 units)*

Description: This small asymmetrical arched fibula has a double coil spring and a very swollen bow with a hemispherical swelling and a longitudinal double ridge; at either side of the dome are ringed mouldings (Blinkenberg II.13).

Chronology: This subtype dates to Submycenaean in the Aegean.

Material: This fibula is made of copper alloy.

Context: Two very small examples of this fibula come from Kerameikos (no. 1549; **Fig. 56:III.c.ii**).

[672] Tufnell 1953, p. 394; Stronach 1959, p. 190.
[673] E.g., in precious metals: Cesnola 1885, pl. 41; and in copper alloy: Gjerstad *et al.* 1934, pl. 154:2.

4.8.3.3.3 *6III.c.iii: Asymmetrical bow with beaded mouldings (1 unit)*

Description: This asymmetrical arched fibula has beaded mouldings at either end of its slightly swollen bow (Blinkenberg II.17/ Pedde Groupe A2.2), and often a combination of circular and square mouldings.

Chronology: Examples in this dataset date to Submycenaean, although other examples date to Late Helladic IIIC.[674]

Material: This subtype is made of copper alloy.

Context: In this dataset, one example comes from Kerameikos Tomb 70 (no. 1543; **Fig. 57:III.c.iii**), but other examples come from Kerameikos Tomb 42,[675] Kerameikos Tomb 108,[676] Lefkandi,[677] and Tiryns.[678]

4.8.3.3.4 *6III.c.iv: Asymmetrical swollen bow with beaded moulding (4 units)*

Description: This plain fibula has a pronounced swell on the bow, a collared beaded moulding at the elbow, and either a single or double spring coil (Pedde Groupe A2.3).

Chronology: This subtype dates to Submycenaean.

Material: This fibula is made of either copper alloy or iron.

Context: In this dataset, a few examples come from Kerameikos (nos. 1523, 1533, 1534, and 1570; **Fig. 57:III.c.iv**).

4.8.3.3.5 *6III.c.v: Asymmetrical swollen bow with mouldings either side of bow (3 units)*

Description: This fibula is similar to the previous subtype, but the asymmetrical and angular swollen bow has collared mouldings on the spring arm and forearm (Blinkenberg Type II.19/ Pedde Groupe A2.3).

Chronology: This fibula dates to Submycenaean.

Material: In the Aegean, this fibula is made of either copper alloy or iron, but in Cyprus (from which this subtype possibly originated),[679] it is typically made of gold.

Context: Subtype 6III.c.v comes from Kerameikos (nos. 1516–1518; **Fig. 57:III.c.v**); it is comparable to fibulae from *Skoubris* Tomb 43 at Lefkandi.[680]

[674] Tiryns: Kilian 1982, p. 88, fig. 13. See also Mountjoy (1988, p. 23) regarding her Late Helladic IIIC dating of Kerameikos Tomb 42.
[675] Mountjoy 1988, p. 23.
[676] Kraiker and Kübler 1939, pl. 28, top left, second and third from the left.
[677] Popham *et al.* 1980, pl. 247:18.
[678] Kilian 1982, p. 88, fig. 13.
[679] Popham *et al.* 1980, pp. 237–238. See also Blinkenberg Type 13:Id.
[680] Catling and Catling 1980, pl. 238.k

4.8.3.3.6 *6III.c.vi: Asymmetrical swollen with collared beads (1 unit)*

Description: This silver fibula has a gold oblate bead boss on the spring arm and on the forearm (similar to Blinkenberg Type II.19). Gold wire rings collar each side of the gold beads, with the ends of the wire neatly overlapping.

Chronology: This fibula dates to Cypro Geometric I.

Material: This subtype is made of gold beads and silver wire. Both gold beads on the example in this dataset have breaks in the sheet-metal, revealing an inner core of bronze.[681]

Context: One example comes from Kouklia in Cyprus (no. 2271; **Fig. 57:III.c.vi**).

4.8.3.3.7 *6III.c.vii: Asymmetrical bow with rectangular section (3 units)*

Description: This plain version of the asymmetrical fibula has a rectangular rather than circular section (Blinkenberg Type II.15/Pedde Group A3).

Chronology: This subtype occurs in Submycenaean contexts.

Material: The examples in this dataset are made of copper alloy.

Context: This subtype comes from Kerameikos (nos. 1641, 1666 and 1674; **Fig. 57:III.c.vii**).

4.8.3.3.8 *6III.c.viii: Small, very swollen asymmetrical bow (1 unit)*

Description: This fibula is similar in shape to Subtype 6II.cv, but is much smaller (similar to Blinkenberg Type II.17 and 19), and has bead and fillet mouldings on the elbow.

Chronology: This subtype dates to Submycenaean.

Material: Subtype 6III.c.viii is made only of copper alloy.

Context: This dataset includes one example from Lefkandi (no. 1673; **Fig. 57:III.c.viii**).

4.8.3.4 Subtype 6III.d: Triangular bow

4.8.3.4.1 *6III.d.i: Plain triangular bow (2 units)*

Description: The literature sometimes refers to this fibula as a 'knee' or 'elbow' fibula (Stronach Type III.1/Pedde Group A4). The bow has a central peak with both spring arm (the half of the bow leading from the spring) and forearm (the half of the bow leading to the clasp) at times concave.

Chronology: Although rare, scholars argue that this subtype developed in the southern Levant around 900 BCE.[682] Nonetheless, some examples in this dataset date to Iron Age I–IIA.

[681] Cf. Kaloriziki: Catling 1964, p. 244, subtype (b), no. 2 and fig. 22:35.
[682] Stronach 1959, p. 193. Cf. Albright 1943, p. 34 and Tufnell 1953, p. 394.

Material: These fibulae are made of copper alloy.

Context: Triangular bow fibulae come from Megiddo (nos. 785 and 858; **Fig. 57:III.d.i**).

4.8.3.4.2 *6III.d.ii: Triangular bow swollen elbow (1 unit)*

Description: This symmetrical bow has a swollen elbow at its peak (Blinkenberg Type XIII.9).

Chronology: This subtype dates to Protogeometric in the Aegean.

Material: Triangular fibulae are made of copper alloy.

Context: One example comes from Marmáriane (no. 1736; **Fig. 57:III.d.ii**).[683]

4.8.3.4.3 *6III.d.iii: Triangular bow with ribbed and beaded mouldings (2 units)*

Description: This symmetrical fibula has beaded mouldings on both spring arm and forearm (Stronach Type III.7/Pedde Group C1.2–4).

Chronology: A single specimen in the dataset dates to the Iron Age I, but this subtype usually dates to the eighth century BCE or later.[684]

Material: This example is made of copper alloy.

Context: Two examples in this dataset come from Beth Shemesh (no. 207; **Fig. 57:III.d.iii**). A parallel for this subtype also comes from 10th century Khirbet en-Nahas in Transjordan.[685]

4.8.3.5 Subtype 6III.e: Unusual shapes

4.8.3.5.1 *Subtype 6III.e.i: Spectacle spiral (3 units)*

Description: This distinctive and ornate fibula is composed of two tightly coiled discs, often in the shape of an S-spiral rather than a true antithetical spectacle spiral (Blinkenberg Type XIV).[686] Decorative features can include bosses on each coil that are attached by means of a rivet through the underside of the spiral coil; this rivet can also serve as the catch-plate for the pin.[687]

Chronology: This subtype dates to the Protogeometric in the Aegean.[688]

Material: These fibulae have iron spirals with gold-plated bronze bosses.

[683] Cf. Pherae: Kilian 1975, pl. 5:201.
[684] Refer to Stronach 1959, p. 197.
[685] EDM R09F0149: Levy *et al.* 2014, fig. 2.260a.
[686] On the significance of the spiral motif in antiquity, refer to Section 4.6.4.3.
[687] Heurtley and Skeat 1930–1931, p. 36.
[688] Although distinctive, the spectacle fibula is not an effective chronological marker: see Alexander 1965, in Catling 1996a.

Context: Examples in this dataset come from Marmáriane in northern Greece (nos. 1717, 1730 and 1731; **Fig. 57:III.e.i**), but others come from Lefkandi[689] and Pherae.[690] This subtype also comes from Apuglia in Italy,[691] and it was common in central Europe.[692]

4.8.3.6 Subtype 6III.f: Undefinable shapes and fragments (9 units)

Description: Several fragments in this dataset belong to fibulae subtypes. These typically include part of the spring or catch-plate.

Chronology: These fragments date to Iron Age I–IIA in the southern Levant and to Submycenaean–Early Protogeometric in the Aegean.

Material: These fibulae fragments are of silver, copper alloy, or iron.

Context: The dataset includes fragments from Gath and Qasile in Philistia, from Nasbeh in Cisjordan, and from Kerameikos and Lefkandi in the Aegean.

4.9 CATEGORY 7: FOIL ORNAMENT TYPOLOGY

Thin sheets of hammered precious metals were used in several ways to adorn the dead in elite mortuary practices. These ornaments are divided into: (1) *diadems* (or frontlets); (2) *mouthpieces*; and (3) *plaques*. These three types have additional subdivisions for variations in style. Diadems were positioned over the forehead and mouthpieces covered the mouth; in both cases, threads through the opposing single or double perforations could attach these objects around the head of the deceased. Diadems and mouthpieces are often classified incorrectly in the literature, as their purpose is clear only when they are discovered *in situ*. Plaques, on the other hand, decorated clothing or shrouds. In all cases, these ornaments can be either plain or decorated. Decorations include *en pointillé* lines or motifs, incised details, motifs embossed by pressing the metal into a negative mould, or motifs stamped from the rear side of the sheet to produce a positive image.[693]

4.9.1 Type 7I: Diadems

4.9.1.1 Subtype 7I.a: Plain rectangular (29 units)

Description: This diadem is made of thin foil or sheet-metal and is usually long and narrow with squared-off ends. The sides can be parallel or slightly tapered towards the ends.

Chronology: These objects date to Iron Age IIA in Cisjordan and to Late Cypriote II–III in Cyprus.

[689] Catling and Catling 1980, p. 235.
[690] Kilian 1975, pl. 58:1628.
[691] Bietti Sestieri 1992, p. 193 with references, Type 55, pl. 133:613.
[692] For bibliography, refer to Heurtley and Skeat 1930–1931, p. 36, fn. 1.
[693] Ogden 1982, pp. 36–39.

Material: All examples are made of gold.

Context: In this dataset, only two examples come from the southern Levant at Far'ah (nos. 612 and 702), although another Early Iron Age plain diadem of silver comes from the Akhziv cemetery.[694] Although not popular in the Early Iron Age southern Levant, these diadems were popular at Late Bronze Age 'Ajjul and at Megiddo in Stratum XI. The majority of diadems come from Cypriote burial contexts.

4.9.1.2 Subtype 7I.b: Decorative rectangular (43 units)

Description: These rectangular foil or sheet-metal diadems have *repoussé* or *en pointillé* decorations, such as a simple punctate line around the perimeter; embossed circle, rosette, or spiral motifs; or complex arrangements with multiple motifs. In one case, a diadem from Enkomi has an *en pointillé* border surrounding two opposing sphinxes of Near Eastern inspiration (no. 2148).

Chronology: The decorative diadems in this dataset date to Late Bronze Age–Iron Age IIA in Cisjordan, to Submycenaean–Protogeometric in the Aegean, and to Late Cypriote I–III in Cyprus. On Crete, Early Bronze Age examples come from Early Minoan II–III Mochlos,[695] and Early Minoan II–Middle Minoan II Mallia.[696]

Material: These diadems are all made of gold.

Context: This dataset includes Early Iron Age diadems with decorative motifs from Far'ah (nos. 269 and 613), including one from Tomb 935 that was found with fragments of an anthropoid coffin.[697] Diadems also come from Megiddo in Strata XII and XI and then again in IX and VIII — some of these *in situ* on the forehead of the deceased.[698] Late Bronze Age examples from 'Ajjul have the same punctate borders as those found in Cyprus.[699]

This dataset includes only one diadem of thin sheet-metal from the Aegean at Kerameikos (no. 1593); this is an unusual small necktie-type diadem with rounded ends and a central pendant ending in an open loop. The band has embossed interlocking waves and the pendant has embossed rectangles on its upper section and incised lines, zigzags, and crosses in the lower section; the loop at the end of the pendant has two lateral incised lines. Somewhat similar bands with pendants, which Higgins describes as looking like elongated 'pen-nibs' come from Subprotogeometric tombs at Lefkandi, and from a LG tomb at Skyros.[700] This subtype is also known by the term 'knee-band', having been found near the knee in some 16th century BCE burials at Mycenae.[701]

[694] Mazar 2001, fig. 5:5.
[695] Seager 1912, pp. 8–10, 41, 43.
[696] Demargne 1945, pl. 65:565.
[697] Petrie 1930, p. 25, pl. 51.VII.
[698] Loud 1948, pl. 227:1–3 and 227:5–7. See also Guy 1938, pl. 165:12 and 165:16–17.
[699] Petrie 1933, pl.14:5; 1934, pl.18:113; Maxwell-Hyslop 1971, fig. 85.
[700] Refer to Higgins 1980b, pp. 219–220, pls. 217e, 228a, 229c, and 232e–h.
[701] Konstantinidi-Syvridi 2015, p. 154.

Decorative diadems are popular throughout the Late Helladic period in Greece, where they come from Mycenae,[702] the Menidi Tholos tomb, the Late Helladic I–IIIA tholos tomb at Pylos, and the Late Helladic IIIC Tombs XV and XXXII at Ialysos.[703] These diadems are also popular in Cyprus, where they come from Enkomi, Hala Sultan Tekke, and Maroni.

4.9.1.3 Subtype 7I.c: Plain lentoid (2 units)

Description: The excavators called these lentoid or elliptical-shaped objects made of foil or sheet-metal 'diadems', but they may in fact be incorrectly classified 'mouthpieces'.[704] The true purpose of the two examples is not discernible from their length or appearance, but as each is very narrow (12 and 18 mm respectively), they remain classified in the dataset as diadems.

Chronology: These diadems date to Late Cypriote II–III.

Material: All examples are of gold.

Context: The limited examples in the dataset come from Tomb 19 at Enkomi (nos. 1854 and 1857; **Fig. 58:I.c**).

4.9.1.4 Subtype 7I.d: Decorative lentoid or elliptical (9 units)

Description: In a few cases, these decorative foil or sheet-metal strips might be mouthpieces rather than diadems, but in this dataset, the excavator's interpretations are accepted. Some examples are very small — starting at 50 mm in length. Decorative motifs include S-spirals, ram's heads, and in one case, arch-shaped palmettes (no. 1823).[705]

Chronology: These diadems occur in Late Cypriote I–III contexts.

Material: The examples are made of gold.

Context: In this dataset, examples come only from Enkomi, many of these from Tomb 2 (nos. 1753–1757).

4.9.2 Type 7II: Mouthpieces

4.9.2.1 Subtype 7II.a: Plain rectangular (4 units)

Description: In rare cases, a strip of foil or sheet-metal with parallel sides and square or rounded ends is classified as a mouthpiece rather than a diadem. Threads through the opposing single or double perforations could attach these objects around the head of the deceased.

[702] Karo 1930–1933, pls. 14, and 35–36.
[703] For bibliography, refer to Åström, L. 1972, p. 109.
[704] Crewe *et al.* 2009, no. 19:22; Marshall 1911, p. 22. See Subtype 7II.a.
[705] Cf. identical stamp used on FR. E. 4540 from Cave 5: Schaeffer 1952, pl. 39; and on British T84a: Higgins 1961a, pl. 2:141.

Chronology: These mouthpieces date to Iron Age I in the southern Levant and to Late Cypriote I–III in Cyprus.

Material: These objects are all of gold.

Context: A rectangular piece of sheet-metal from an 11th century BCE cremation burial (D63) at Azor would normally be classified as a diadem, but its location *in situ* on the mouth of the deceased confirmed its identification as a mouthpiece (no. 11; **Fig. 58:II.a**).[706] Excavators classified similar pieces from Enkomi as mouthpieces, although their actual function is unclear (nos. 1798, 2057, 2168). In the southern Levant, additional strips come from Late Bronze Age II–Iron Age IIA tombs at Far'ah,[707] Megiddo,[708] Beth Shean,[709] the Persian Garden at Akko,[710] and the Mycenaean tomb at Dan.[711]

4.9.2.2 Subtype 7II.b: Decorative rectangular (14 units)

Description: In nearly every case, these rectangular strips of foil or sheet-metal might be misidentified diadems. These objects have a variety of decorative motifs, including punctate lines, rosettes, S-spirals, palmettes, lotuses, ivy leaves, and volutes.

Chronology: This subtype dates to Late Cypriote I–III.

Materials: These mouthpieces are made of gold.

Context: In this dataset, examples come only from Enkomi. One example, with impressed lines in the shape of a mouth, is the only strip that can be classified as a mouthpiece with any certainty (no. 2082).

4.9.2.3 Subtype 7II.c: Plain lentoid or elliptical (12 units)

Description: This subtype with a lentoid or elliptical shape made of foil or sheet-metal is usually classified as a mouthpiece, and has no decoration.

Chronology: These mouthpieces date to Iron Age I in Cisjordan, and to Late Cypriote II–III and Cypro Geometric II–III in Cyprus.

Materials: The examples in this dataset are made of gold.

Context: Two plain mouthpieces come from Tomb 39 at Megiddo (nos. 828 and 830); the remainder come from Enkomi and Kouklia in Cyprus.

[706] Ben-Shlomo 2008, fn. 4; Dothan 1960, p. 260. Oren (1973, p. 119) notes the similarity of the mouthpiece from Beth Shean (which probably belonged to a coffin burial) to Mycenaean and Cypriote funerary deposits.
[707] Maxwell-Hyslop 1971, pls. 202–203; Petrie 1930, pp. 11–13, pls. 36 and 40:500.
[708] Guy 1938, pls. 128:9 and 165:12.
[709] Oren 1973, pp. 15, 119, fig. 46:15; Rowe 1930, pl. 39:2.
[710] Ben-Arieh and Edelstein 1977, p. 26, fig. 14:10–11.
[711] Biran and Ben-Dov 2002, p. 174, fig. 2:137–38.

4.9.2.4 Subtype 7II.d: Decorative lentoid or elliptical (26 units)

Description: These lentoid or elliptical-shaped mouthpieces made of foil or sheet-metal are often bordered by an incised or punctate line. Decorative motifs include cross-hatching (or latticing), rosettes, palmettes, S-spirals, and antithetic spirals, and often a pair of central lentoid-shaped lines that might represent lips.

Chronology: These mouthpieces date to Late Bronze Age–Iron Age I in Cisjordan and to Late Cypriote I–III in Cyprus.

Materials: The examples in this dataset are all of gold.

Context: This dataset includes one mouthpiece within an anthropoid coffin from Tomb 202 at Beth Shean (no. 198), another two from Megiddo (nos. 829 and 845; **Fig. 59:II.d**), and numerous examples from Enkomi, Hala Sultan Tekke, and Kouklia in Cyprus. The cross-hatching on one diadem from Tomb 39 at Megiddo (no. 829) occurs on other diadems from Tomb 9 at Kition, [712] while a second diadem from Megiddo (no. 845) has a complex and multi-petalled rosette.[713]

4.9.3 Type 7III: Plaques

4.9.3.1 Subtype 7III.a: Plain roundel (7 units)

Description: Undecorated circular roundels made of thin gold foil are not common in any region; however, their inherent value meant they acted as prestigious ornaments for the dead in funerary rituals. Typically, threads through the opposing single or double perforations could attach these objects to clothing or shrouds.

Chronology: These plaques date to Late Helladic IIIB–C in the Aegean and Cypro Geometric IA–II in Cyprus.

Material: This subtype is made of gold.

Context: In this dataset, examples come from Tomb 157 at Perati in the Aegean (no. 1737.142), and Tomb 67 at Kouklia in Cyprus (nos. 2288, 2295, 2298, 2299, 2304, 2305; **Fig. 59:III.a**).

4.9.3.2 Subtype 7III.b: Decorative roundel (195 units)

Description: The term 'rosette roundel' denotes all circular pieces of thin foil with a radially-symmetrical floral motif.[714] One roundel from Megiddo differs in that it has a decorative thunderbolt symbol familiar from Hittite iconography (no. 821);[715] as this roundel is imperforated, its function remains unclear.

[712] Karageorghis 1974, pls. 90 and 91.
[713] Cf. a similar motif from Kition: Karageorghis 1974, pl. 90.
[714] Kantor 1945, p. 127.
[715] For parallels, see Paice 2004, p. 76.

Chronology: These roundels date to Late Bronze Age–Iron Age I in Cisjordan, Late Minoan IIIA–Subminoan in the Aegean, and Cypro Geometric IA–III in Cyprus.

Material: The examples in this dataset are made of electrum or gold.

Context: In Cisjordan, one roundel comes from Tomb 934 at Far'ah (no. 258), and another comes from Tomb 39 at Megiddo (nos. 821 and 842). This subtype, familiar from the Late Minoan IIIA–B, continues to appear in Subminoan tombs at the Knossos North Cemetery.[716] At Sellopoulo, Late Minoan III Tombs 3 and 4 also yielded a great many stamped roundels; Tomb 3 contained 20 of them, and Tomb 4 contained almost 150.[717] The excavators suggest that the remains in Burial I (Tomb 4) at Sellopoulo, which had rosettes positioned above and below the upper body as though originally attached to a shroud, might be those of a warrior, while a female in Burial III (also in Tomb 4) had rosettes positioned in such as way as to suggest their placement along the hemline of a skirt.[718] These roundels are comparable to examples from Mycenae[719] and Dendra.[720] In Cyprus, several examples also come from Tombs 67 and 79 at Kouklia.

Discussion: The simplicity of the designs can sometimes render it difficult to determine whether they are in fact floral rather than geometric. The rosette motif occurs in the Aegean, Cyprus, Egypt, the Levant, and Mesopotamia, although scholars once argued that the rosette derived from Crete.[721]

4.9.3.3 Subtype 7III.d: Decorative rectangular (4 units)

Description: These rectangular plaque ornaments are made of thin foil and decorated with rosettes or (in two cases) an embossed chariot group scene (nos. 2324 and 2332).[722]

Chronology: These plaques date to Cypro Geometric I–III in Cyprus.

Material: These examples are made of gold.

Context: In this dataset, all examples come from Kouklia (nos. 2281, 2290, 2324, 2332; **Fig. 59:III.d**).

4.9.3.4 Subtype 7III.e: Decorative square (4 units)

Description: This plaque is a variation of Subtype 7III.d but it has sides of almost equal length. Cypriote plaques with embossed rosettes were perhaps destined to be circular roundels but were never trimmed.

[716] Higgins 1996, p. 539. At Lefkandi, the tradition of gold-sheet/gold-foil ornaments makes its appearance in the 10th century *Heroön* burial where two discs located on the breasts of the deceased with a lunate piece between them are each decorated with *repoussé* dots and lines: Popham *et al.* 1980, p. 219.

[717] Popham and Catling 1974, p. 214, figs. 11:i–j and 12.

[718] Popham and Catling 1974, p. 214; Wace 1932, pp. 195–196. Cf. Tholos D, a Late Minoan IIIA tomb at Phourni in Crete, where beads were found *in situ* on the floor of the grave in wavy lines as though sewn to the hem of a robe or on a shroud: refer to Effinger 2000. See also Tholos A: Sakellarakis 1966.

[719] Mylonas 1972, pls. 6, 9, 12, 37, 43, 44, 68, 76, and 80.

[720] Persson 1942, pl. 3.

[721] Streng 1918, p. 32.

[722] Karageorghis 1983, p. 242.

Chronology: This subtype dates to Late Bronze Age–Iron Age I in Cisjordan and to Cypro Geometric I–III in Cyprus.

Material: These plaques are made of gold.

Context: One example comes from Tomb 935 at Far'ah (no. 274; **Fig. 59:III.e**) and three come from Kouklia (nos. 2275, 2276, and 2329). The object from Far'ah differs from its Cypriote counterparts in that it has a geometric punctate design rather than an embossed rosette.[723]

4.10 OBSERVATIONS ABOUT THE TYPOLOGY

As a result of creating this new typology and using it to classify 3900 items of jewellery, I can make several important observations about each of the seven major categories of jewellery contained in the typology.

4.10.1 Category 1: Earrings

The plain elongated lunate of copper alloy (Subtype 1I.b) is the most frequently occurring earring in the southern Levant, and is a characteristic feature of Late Bronze Age and Early Iron Age settlement and burial contexts, but it is less common in Cyprus and does not appear at all in the Aegean. Type 1II lunate varieties also include Late Bronze Age traditions that continued into the Early Iron Age, such as earrings with a drop attached to the base of the body (Subtype 1II.a) and so-called 'mulberry' earrings (Subtype 1II.b). Both subtypes are distinctively Near Eastern earrings, although mulberry earrings also occur on Late Minoan Crete and Late Bronze Age–Early Iron Age Cyprus, implying that there was a regional familiarity with this style.[724] Limited quantities of Type 1IV wire hoops come from the southern Levant (Subtype 1IV.a); these hoops are noticeably different from the larger hoops popular in Cyprus that typically have a slight swell at their base (Subtype 1IV.b).

The Late Bronze Age to Early Iron Age transition in the southern Levant witnessed the arrival of new and distinctive subtypes of earrings, including so-called 'tassel' earrings. Initially these earrings take the form of simple Subtype 1II.d lunates with bud-like pendants that have incised decorations, and Subtype 1II.e lunates with flared pendants that are plain. The distribution of these two subtypes is shown in the map below:

[723] Laemmel (2003) also lists sheet ornaments 935/S38-39 from Far'ah, but these are not illustrated and no data is available.

[724] Higgins 1980a, pl.12f; Pierides 1971, pl. 13:10; Åström, L. 1972, p. 571.

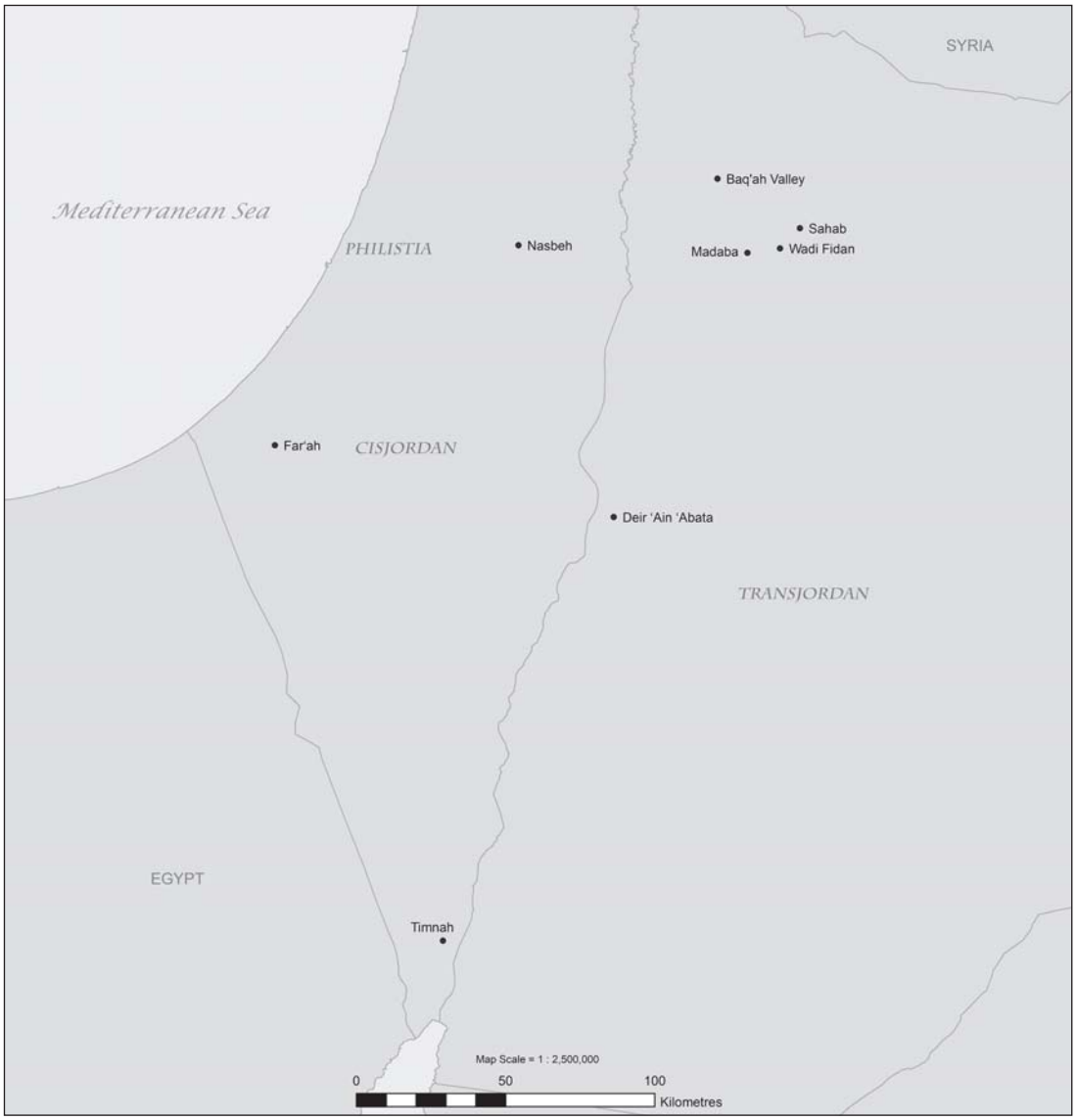

Fig. 5. Distribution of earring Subtype 1II.d–1II.e with bud-like pendants

The transition from a bud to a tassel culminates in Subtype 1II.f tassel earrings that have granular detailing. While there is no evidence to support the suggestion that the *Sea Peoples* introduced this subtype to the southern Levant,[725] the fact that it coincides with a Philistine presence in the region may reflect new strategies in adornment practices.[726] The distribution of Subtypes 1II.d–1II.f is shown in the map below:

[725] Cf. Sass 1997, p. 243.
[726] Verduci 2014.

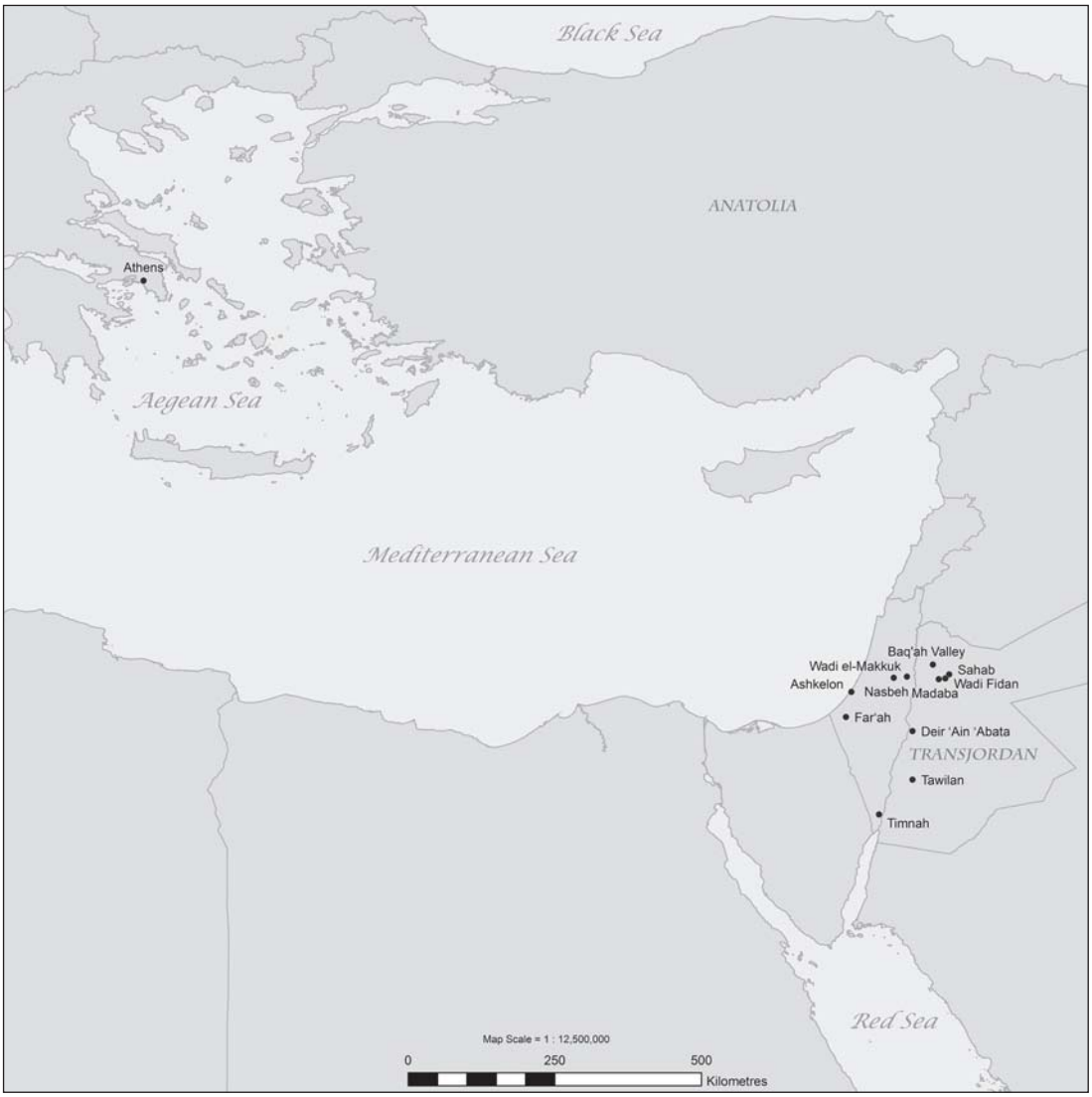

Fig. 6. Distribution of earring Subtypes 1II.d–1II.f with bud-like/tassel pendants

Late Bronze Age Subtype 1III.a earrings with trilobate flowerbud pendants might be the prototype for these bud-like and tassel earrings. Despite appearing in limited quantities, this subtype reflects the regional popularity of the pomegranate bud and it thus has a connection to Levantine cult.[727] The distribution of this subtype in the eastern Mediterranean is shown in the map below.

By contrast, earrings with embossed bucrania pendants are distinctively Cypriote (Subtype 1III.c–e). For the most part, earrings are uncommon in the Aegean, but a few examples with bucrania come from Crete and the Greek mainland. The bucranium variation with a granulated cone (Subtype 1V.d) does not occur in the southern Levant, and most likely has its origins in the Cypriote bucranium pendant. Regardless of whether the Cypriote bucranium styles that were discovered in the Aegean were imports or locally-made, they reflect the cultural links that existed between the two regions.

[727] Artzy 1991.

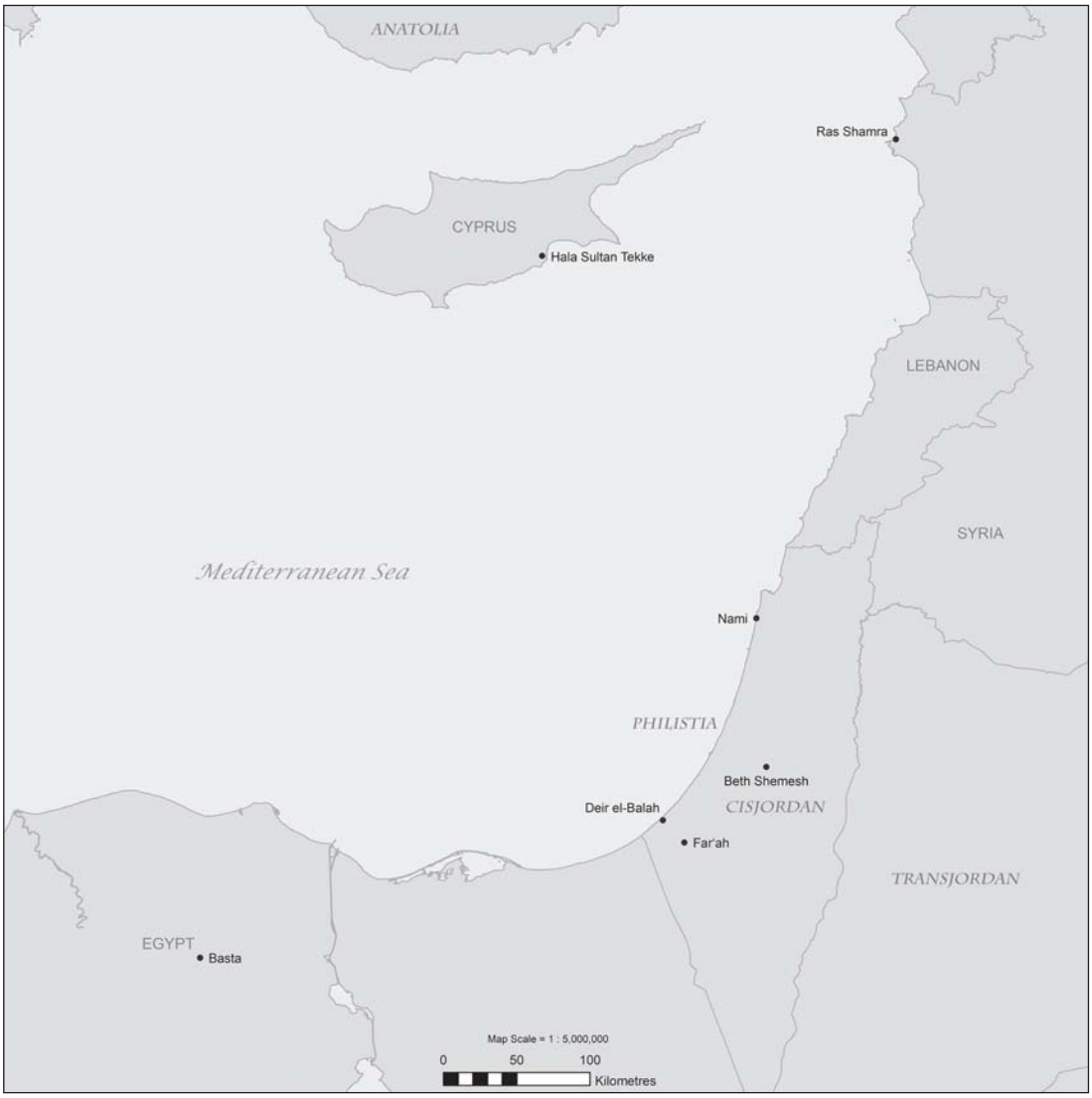

Fig. 7. Distribution of earring Subtype 1III.a with trilobate flowerbud pendants

4.10.2 Category 2: Rings

Rings occur throughout all chronological periods in the southern Levant, but they are less common in the Aegean and Cyprus. The majority of rings are plain and have unsophisticated shapes; typically, these are Type 2I finger rings made of open-ended or overlapping copper alloy wire with a circular section (Subtype 2I.b.i and Subtype 2I.c.i). Most Type 2II rings are overlapping styles, but unless they are found *in situ*, it is rare for them to be identified as toe rings. The penchant for more complex Egyptian-style stirrup and bezel rings (Subtypes 2III.b and 2III.d) may indicate that their wearers were strategically involved in the social reproduction of status in the southern Levant;[728] however, these rings lack the range of techniques and scale of those from the Aegean and Cyprus, possibly

[728] Hayden 1998; Peregrine 1991. Cf. Knapp 1986; 1996; Webb 2002, p. 111; Keswani 1989, pp. 69–70.

due to a decline in elite paraphernalia as the Iron Age began. Subtype 2I.d.ii bands that have incised motifs of Hittite inspiration bear some typological similarities to Type 2III bezel rings; these rings were perhaps also linked to perceptions of prestige.

In the Aegean, finger rings that are not engraved are rare before the Late Helladic IIIC, but they become increasingly popular during the Early Iron Age. Particularly common are Type 2I finger rings from the Argolid that are closed (Subtype 2I.a.i), or that have open-ended (Subtypes 2I.b.i and 2I.b.iv) or overlapping (Subtype 2I.c.i and 2I.c.v) terminals. Type 2IV spirals of plain wire are also common in the Submycenaean and Protogeometric jewellery assemblages of the Aegean; of these rings, double-stranded Subtype 2IV.b is the most unique and appears to be a central European tradition. It is possible wire rings were included in burials or hoards for their value rather than their function as finger rings or hair spirals.[729] The distribution of Subtype 2IV.b in Europe and the eastern Mediterranean is shown in the map below:

Fig. 8. Distribution of double-stranded ring Subtype 2IV.b

[729] Dakoronia 2007, p. 62.

Ring styles that date to the Protogeometric are more limited; during this period, there is a preference for heavy overlapping rings of copper alloy or iron. Another popular style during the Submycenaean and Protogeometric periods is a strip of thin sheet-metal that is bossed up (Subtype 2I.d.i); this subtype also appears in Cyprus, but it does not appear in the corpus of southern Levantine jewellery. This fragile ring demonstrates a level of economy that may relate to its use in mortuary contexts rather than its use in daily life. In Cyprus, plain finger rings occur throughout all the Late Cypriote periods, although closed rings (Subtype 2I.a) mainly date to Late Cypriote II and IIIB.[730] Shared traditions between Cyprus and Crete can be found in the finger rings that have bezels decorated with wire, granulation, or *cloisonné* (Subtypes 2III.f and 2III.h).

4.10.3 Category 3: Bangles

Bracelets, anklets, and armlets form the largest category of metal jewellery in the southern Levant.[731] The custom of wearing bangles possibly arrived in the southern Levant from Anatolia, where they first appear at Tepe Hissar IIB (*ca.* 3365–3030)[732] — often in association with horse iconography and paraphernalia.[733] Typologically, bangles change very little between the Late Bronze Age and Early Iron Age,[734] although Iron Age I styles sometimes have blunt terminals (Subtype 3II.a.ii, Subtype 3II.a, and Type 3IV), and bangles with overlapping terminals (Type 3III) become more common in the Iron Age than bangles with open-ended terminals (Type 3II). The most frequently occurring bangle varieties are those of copper alloy with a circular section and tapered terminals (Subtype 3II.b and Subtype 3III.b). The most notable bangles are decoratively incised. Those with geometric designs might be non-local in origin; in particular, these include Subtypes 3IV.b–3IV.c, which are associated with the *Sea Peoples* and with 13th–10th century BCE traditions from central Europe. The distribution of Subtypes 3IV.b and 3IV.c in the southern Levant is shown in the map below.

Moulded female figurines that date from the latter half of the 13th century BCE through to the Early Iron Age demonstrate the manner in which multiple anklets and bracelets could be worn;[735] these figurines corroborate the claim that wearing multiple anklets was gender-specific to females, while single anklets were associated with status when worn by males.[736]

[730] Åström, L. 1972, p. 563.
[731] Bloch-Smith 1992, p. 82.
[732] Voigt and Dyson 1992, pp. 173–174.
[733] Tufnell 1958a, pp. 51–53.
[734] McCown 1947, p. 303; Tufnell 1958a, p. 38; and Tushingham 1972, pp. 107–112.
[735] E.g., Beck 1990, n. 3:1; Kletter 1996, C.6.A.11; Tufnell 1958b, pl. 49:4; and Paz 2007, fig. 2:2. See examples from ʻIra: Beck 1990, fig. 1; Hazor: Yadin *et al.* 1961, pl. 253:11; Jawa: Daviau 2002, p. 60, fig. 2.30:3; Beth Shean: Beck 1990, n. 3:5, fig. 5; James 1966, fig. 111:6; Paz 2007, fig. 2.1:3; Delhamiya: Beck 1990, n. 3:6; 1999, fig. 7.7:6; Kletter 1995, 5.E.1.5; Paz 2007, fig. 2.1:4; Tzori 1958; Megiddo: Finkelstein *et al.* 2000, fig. 12.36:1; Rehov: Paz 2007, fig. 2.2:4; Hadar: Kletter 1995, 5.E.1.29; Paz 2007, fig. 2.2:7; Farʻah: Beck 1990, n. 3:16; 1999, Table 7:2: 14, fig. 7.7:4; Braun 1999, fig. IV/1–11a; Chambon 1984, pls. 63:2 and 84; Keel and Uehlinger 1998, fig. 190c; Kletter 1995, 5.E.1.32; Paz 2007, fig. 2.3:1; Jebel Qalʻah: Paz 2007.
[736] Green 2007.

Fig. 9. Distribution of bangle Subtypes 3IV.b–3IV.c

The depiction of anklets and bracelets on female plaque figurines in the Aegean might also signify gendered asymmetry and identity, or as Younger suggests, they might signify the individual as being bound or consecrated in a cultic ritual.[737] Despite their depiction in Cretan frescoes and on seals and figurines,[738] bangles are rare in Late Bronze Age and Early Iron Age burials in the Aegean. It may be that bangles most often took the form of threaded beads, as is suggested by finds at Sellopoulo.[739] The occasional bangle comes from Late Helladic IIIB–C Perati, and Submycenaean Argolid and Athens,[740] but bangles occur more commonly during later periods at Euboea, in central Greece, and in Thessaly — areas that

[737] Younger 1992, p. 274; Kilian-Dirlmeier 1988, fig. 6.
[738] Younger 1988, p. 256; Evans 1921, p. 432, figs. 310a, c; Evans 1928, p. 726, fig. 454, pl. 13; Effinger 1996, pp. 59–73.
[739] Popham and Catling 1974, pp. 201–202.
[740] Kraiker and Kübler 1939, p. 18, Grave 27; p. 48, Grave 108, pl. 28 left; Styrenius 1967, pp. 22 and 48.

all had links to the north.[741] Bangles are also extremely limited in the Early Protogeometric period.[742] By contrast, bangles are familiar in Late Cypriote contexts in Cyprus (especially during the Late Cypriote IIC), although very few examples in Cypriote collections are made of metals other than silver or gold.[743] In contrast to the southern Levant, the identification of anklets in Cyprus is rare, where they occur *in situ* only once within rich Tomb 18 at Enkomi.[744]

4.10.4 Category 4: Pendants

Despite an increase in the number of metal pendants in the Late Bronze Age southern Levant, pendants are the least common articles of metal jewellery in the Early Iron Age.[745] If not for a large quantity of pendants from Megiddo, one might suppose that they were either not a valued component of regional adornment, or that there were heavy restrictions on this form of adornment. This does not imply that necklaces were unpopular; on the contrary, beads of stone and vitreous materials are the most frequently occurring components of jewellery. Most Iron Age metal pendants seem to be of local or Egyptian inspiration, displaying traditions that were continued from the Late Bronze Age; these pendants are predominantly found in cave and bench tombs.[746] Many of these artefacts might have had a culturally-linked amuletic function;[747] such amulets include Type 4I Egyptian deities and Type 4II faunal pendants that come from Late Bronze Age contexts in both the southern Levant and Cyprus. Subtype 4III.a pomegranates were evidently popular across the eastern Mediterranean during the Late Bronze Age–Early Iron Age; these pendants presumably had cultic or ritual associations. Subtype 4IV.d disc plaques, whether decorative or plain, were also popular in the Levant and Cyprus.

The most characteristic pendant in the southern Levant is the crescent (Subtype 4IV.a), which apparently had amuletic or apotropaic qualities that were associated with either bovine symbolism or lunar mythologies.[748] Another distinctive pendant is the spectacle spiral (Subtype 4IV.c), which has a widespread distribution in the Near East, Aegean, Cyprus, Anatolia, and in particular, central Europe.[749] The antithetic spiral motif has a long history in the Near East[750] where it first appears in Mesopotamia during the third millennium BCE;[751] its symbolic significance may rest in its amuletic properties in regards to fertility.[752] Although

[741] Lemos 2002, p. 115.
[742] Catling 1996a, p. 557; Catling and Catling 1980, pp. 246–247; Higgins 1980b, pls. 231.b and 234.g.
[743] Goring 1996, pp. 310–315.
[744] Gjerstad *et al.* 1934, pl. 89:2.
[745] Bloch-Smith 1992, p. 82; McGovern 1985, p. 1.
[746] Bloch-Smith 1992, p. 82. E.g.: Baq'ah Valley A4; Bethlehem; 'Eitun C1; Gezer 142; Jerusalem 26; Lachish 107, 116, 120, 218, 224, 1002; Megiddo 76; Mt Nebo UCV-84; Rechidiyeh A; Samaria 103. In pit and cist graves, they occur in Azor D, Far'ah 222, and Sa'idiyeh 282.
[747] McGovern 1985; 1980a, p. 305; Platt 1992, p. 46.
[748] McGovern 1985, pp. 68–70.
[749] Refer to 'Subtype 4IV.c'.
[750] Evans 1892–1893, p. 218; Kantor 1947, pp. 18, 29–32; Mallowan 1947, p. 29, pl. 32:8, figs. 9–18.
[751] Maxwell-Hyslop 1971, p. 23, pl. 22.
[752] Maxwell-Hyslop 1960, pp. 107–108; Frankfort 1944, p. 198, figs. 2–3. For additional references, see Van Buren 1945.

pendants in the southern Levant usually do not demonstrate the complexity of design of those from the Aegean and Cyprus (where pendants often incorporate techniques such as *repoussé*, granulation, and filigree), one spectacle spiral from Tawilan is an exception (no. 1474). The distribution of pendant Subtype 4IV.c in the eastern Mediterranean is shown in the map below:

Fig. 10. Distribution of pendant Subtype 4IV.c

4.10.5 Category 5: Beads

Like pendants, beads act as components in larger pieces such as necklaces, bangles, earrings, headdresses, and girdles; beads can also be used as sartorial embellishments, chest coverings, or belts. Strings of beads can be dismantled and the components reincorporated within new items of jewellery. Any given assemblage might therefore contain a multitude of

bead subtypes from different regions and time-periods, such that the beads themselves are often poor chronological markers.[753]

Type 5I hollow spherical beads occur in limited numbers in the southern Levant; of these, Subtype 5I.c gadrooned 'melon' beads are the most common subtype throughout the Bronze Age and Iron Age. Type 5II oblate beads date mainly to the Bronze Age, although a few examples of Subtype 5II.a occur in Iron Age contexts, mainly at Nasbeh (no. 946). The widest distribution of oblate beads is actually on Cyprus, where they occur throughout the Late Cypriote period;[754] most of these beads occur in flattened globular shapes (Subtype 5II.b) that are familiar from Aegean contexts.[755] The most common beads across the eastern Mediterranean are circular barrel (Subtype 5III.a) and biconical forms (Subtype 5IV.b).[756] Also popular during the Late Bronze Age–Early Iron Age is the cylindrical coiled bead (Subtype 5V.g), which has parallels throughout the eastern Mediterranean.[757] The granular cylinder (Subtype 5V.b) is another common subtype despite its more complex construction; although this bead appears from the Late Bronze Age onward in the southern Levant, its more common appearance in the Early Iron Age coincides with the arrival of the *Sea Peoples*. The distribution of bead Subtype 5IV.b in the eastern Mediterranean is shown in the map below.

Type 5VI relief beads form a distinct subset of spacer beads that were immensely popular in the Mycenaean world. Despite evidence from the Uluburun shipwreck that relief beads were circulating in the eastern Mediterranean, there is no evidence of their presence in the southern Levant by the Early Iron Age.[758] In the Aegean, relief beads diminish in number and variety in the Late Helladic IIIB, until by the Late Helladic IIIC they no longer occur on Crete, and the few from the mainland are possibly heirlooms.[759] By the Early Iron Age in Greece, there is a paucity of beads in general, implying that necklaces containing beads were not as popular as they were during the Late Bronze Age.[760] In Cyprus, beads are mainly of Aegean inspiration, although melon beads (Subtype 5I.c) and grooved barrel beads (Subtype 5II.c) possibly derived their inspiration from the southern Levant. Capped beads (particularly unmarked cylinder beads of stone or faience)[761] were perhaps recognised as symbols of status and identity, or thought to possess apotropaic or talismanic properties.[762]

[753] Crowfoot *et al.* 1957, p. 391.

[754] Gjerstad *et al.* 1935.

[755] Coldstream and Catling 1996, pp. 193–194, pl. 265; Higgins 1996, p. 539; Marshall 1911, no. 622; Åström, L. 1972, p. 32. See also Hala Sultan Tekke (no. 2192).

[756] E.g., Beth Shean (no. 186), Far'ah (nos. 265–266, 643, and 695), Megiddo (no. 844), Enkomi (nos. 1789, 1797, 1916, and 2015), Hala Sultan Tekke (nos. 2193 and 2201), and Kerameikos (no. 1587); Ruppenstein 2007, fig. 11; Åström, L. 1972, p. 575.

[757] Golani 1996, fig. 16:2; 2013, p. 75, fig. 16:2; Popham *et al.* 1982; Peillon 1972, pl. 3:562; Goring 1983b, p. 370. In this dataset, see also Gath (no. 19) and Far'ah (nos. 480 and 524).

[758] Bass *et al.* 1989, p. 9.

[759] E.g., despite the large quantity of jewellery found at 12th century Perati, relief beads are absent: Higgins 1969, p. 143. In addition, no moulds come from Late Minoan/Late Helladic IIIC contexts: Velsink 2011, p. 311.

[760] Higgins 1980a, p. 75.

[761] Niklasson 1983.

[762] Niklasson 1983, p. 153; Porada 1986, p. 290. On unmarked seals as amulets, items of adornment, and markers of status and identity, refer to Knapp 2008, p. 153.

Fig. 11. Distribution of granular bead Subtype 5IV.b

4.10.6 Category 6: Garment Fasteners

Clothing fasteners are not purely decorative like other categories of jewellery, but served as functional objects in the same way as buttons or pins. Type 6I toggle pins are a distinctive and common style of clothing fastener in the southern Levant and have their origins in late fourth millennium BCE Mesopotamia. The most notable pins are those with incised decoration; these subtypes have a similar distribution to decoratively incised bangles (see **Fig. 9**). The distribution of Type 6I pins is shown in the map below.

Toggle pins first appear in the southern Levant at the end of the Early Bronze Age but become more common by the 18th century BCE, by which time they arguably signified Canaanite identity.[763] Reliefs depict Sumerians wearing toggle pins that have cylinder seals

[763] Braunstein 1998, p. 285; Baker 2006, p. 21.

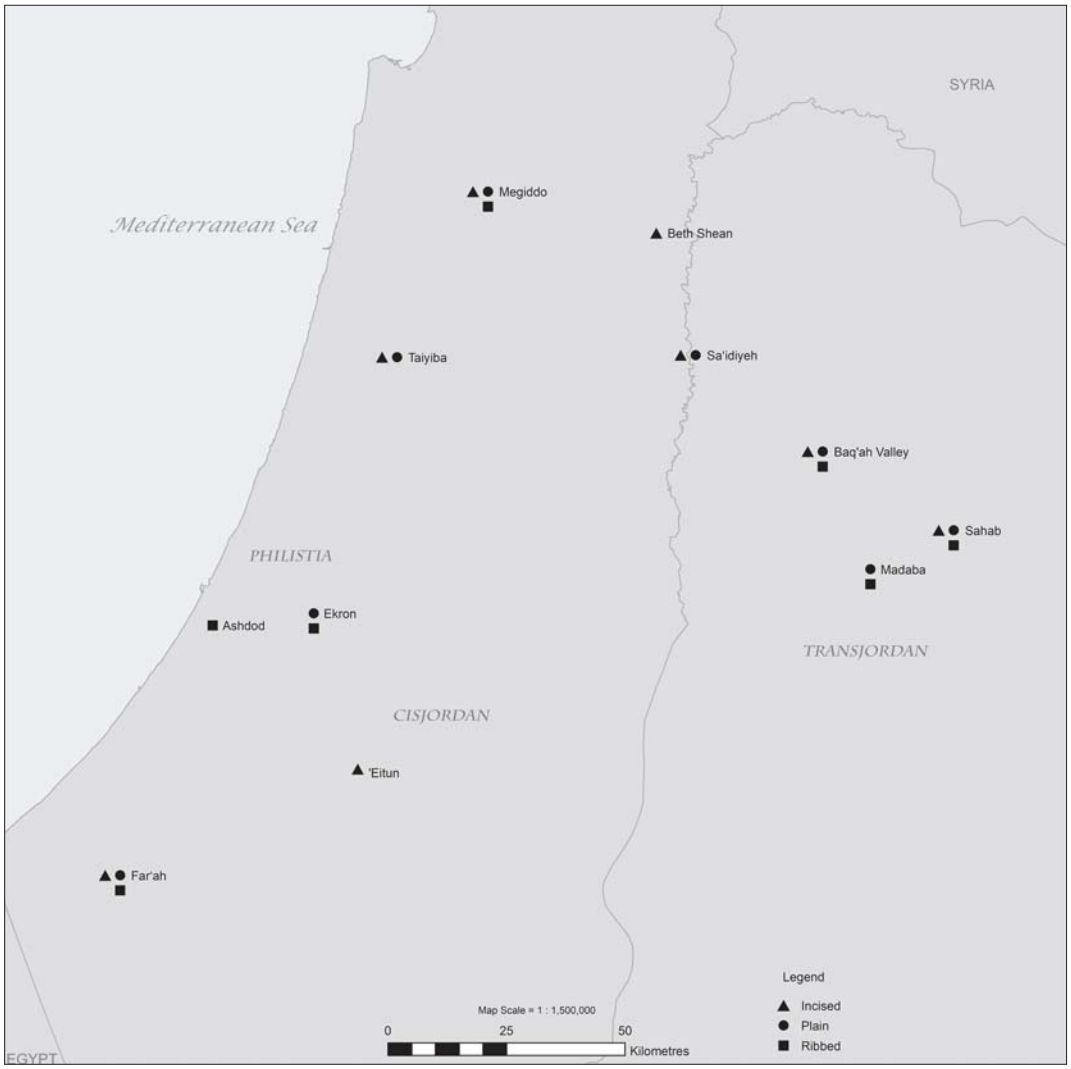

Fig. 12. Distribution of Type 6I toggle pins in the southern Levant (• = plain; ★ = incised; ■ = ribbed)

suspended from them, implying that the toggle pin originally had a dual purpose.[764] As the Sumerian and Aramaean words for 'dowry' are based on the Sumerian term for 'toggle pin,' these pins may very well have formed part of Sumerian women's dowries.[765] By the Early Iron Age, these Type 6I toggle pins are typically found in cave and bench tombs.[766] It is common to find these pins near the upper body within burials, often still attached to remnants of textiles, although it is unclear whether the textiles are from clothing or shrouds.[767]

[764] Rathje 1977, p. 26, no. 8.
[765] Hallo 1983, p. 11; Ziffer 1990, p. 59.
[766] Bloch-Smith 1992, p. 86. E.g., 'Eitun C1; Baq'ah Valley A4; Beth Shemesh 1; Dothan 1; Far'ah 562, 914, 934; Gezer 142; Gibeon; Lachish 106; Madaba B; Megiddo 1100/2; Nasbeh 32 and 54; Sahab C.
[767] See, e.g., constricted bodies at Sa'idiyeh — typically caused by binding: Verduci 2017; Green 2006, pp. 249–251, 584.

During the Middle Bronze Age the eyelet is located in the centre of the pin, but by the Early Iron Age, it is usually located closest to the pointed end. The most common styles from the close of the Late Bronze Age and throughout the Early Iron Age are stake-shaped pins (Subtype 6I.a.ii and Subtype 6I.b.iv). Many toggle pins have a bend below the eyelet as though at some stage the attached string had been pulled;[768] the string acted in the same way as a pin in fastening the object to clothing, thus acting as a prototype for the fibula.[769] Outside of the Levant, toggle pins appear in bronze during the Early Cypriote period of Cyprus as a local development of Near Eastern traditions. Pins begin to appear in gold during the Late Cypriote II period, often as Subtypes 6I.b.ii (ribbed with rhythmical change) and 6I.b.v (rib-and-reel),[770] although ornate styles with an attached bead (Subtype 6I.b.x) are also popular at Enkomi. Cypriote excavators recovered only one pin *in situ* on the chest of a body within Swedish Tomb 17 at Enkomi.[771]

Unlike the adornment customs preferred in the Levant and Cyprus, an imperforated dress pin (Type 6II) was the most frequently used clothing fastener in the Aegean. There is no consensus regarding the origin of the pin,[772] nor is there agreement about its first appearance in the Aegean.[773] Early Iron Age dress pins appear to be local developments of Late Bronze Age pins,[774] although their manufacture in iron becomes more prevalent in the Early Iron Age and the repertoire of shapes becomes more limited. These pins are especially popular in Athens and the Argolid, in contrast to Lefkandi on Eubeoa and Thessaly in the north where there was a preference for fibulae.[775] Catling's analysis of the position of metal jewellery within some Subminoan and Early Protogeometric tombs revealed that (in most cases) pins were worn in pairs, often on the shoulder of the deceased in order to secure the *peplos* on either side of the body.[776] That these pins are often associated with female burials indicates that they may be gender-specific artefacts.[777]

In the Argolid, the first pins date to Late Helladic IIIC, and from the Submycenaean period, they occur together with fibulae in cists and chamber tombs.[778] The three most common pin subtypes include a headless pin with an elongated swelling along the shaft (Subtype 6II.a.iv), a similar pin with a head (Subtype 6II.a.v), and a bimetallic pin with an iron shaft and nail head, and with a bronze globe on the upper shaft (Subtype 6II.b.iv). Submycenaean–Early Protogeometric evidence for pins is most abundant in Athens,[779] while

[768] Henschel-Simon 1937, p. 171; Verduci 2017.
[769] Golani 1996.
[770] Also, Henschel-Simon Type II.B.8ca (regularly ribbed).
[771] Gjerstad *et al.* 1934, Tomb 17:78.
[772] For discussion, see Lemos 2002, p. 103.
[773] Jacobsthal 1956, *contra* Sandars in Hood *et al.* (1958–1959, p. 235). See also Hallager 2012.
[774] Kilian-Dirlmeier 1984, pp. 80–82.
[775] Lemos 2002, p. 108.
[776] E.g., Subminoan tombs S38 and S62, and Early Protogeometric tombs S10 and S16. These pins are associated with pairs of fibula, in all but S62: Catling 1985, pp. 19–20. See also Subprotogeometric II–III burials: Higgins 1980b, p. 222, pl. 231.f.
[777] Catling and Catling 1980, p. 246; Snodgrass 1971, pp. 232, 394; Styrenius 1967, p. 47.
[778] Refer to Deshayes 1966, pp. 90–93, pl. 87.6.
[779] E.g., PG A; PG B, PG 1; PG 2; PG 3; PG 4; PG 11; PG 12; PG 13; PG 21; PG 25; N 114; AM 81; hs76; hs92a; hs101; TN 94–2. PG 1N–3N date to Subminoan in Styrenius (1967, p. 55), but to Early Protogeometric in Lemos (2002, p. 9, fn. 56).

at Lefkandi, pins are the second most common metal artefacts after fibulae. Subminoan pins at Lefkandi are usually simple shaft and nail head varieties that have a slight swelling close to the head (Subtype 6II.a.v); these pins possibly mimicked Athenian styles (albeit of shorter length).[780]

The violin bow fibula is one of the earliest varieties of fibula in the Aegean and Cyprus, and it occurred with a horizontal bow parallel to the pin in both Italy and Greece from the 14th century BCE (Subtype 6II.a.ii).[781] In most cases, Subminoan and Early Protogeometric fibulae are simple versions of the arch-bow and leaf-bow subtypes.[782] Added detail during the Subminoan is limited to finely traced lines, and in the Early Protogeometric, it is limited to notches on the arch-bow fibula[783] or *en pointillé* designs on the leaf bow fibula.[784] At sites such as Lefkandi, fibulae form the largest category of bronze and iron object in burials, where they often appear in pairs and on each shoulder as though they were meant to secure a *peplos* at that point.[785] Fibulae appear in Cyprus from Late Cypriote IIIA (*ca.* 1200 BCE), having been introduced from the Aegean at the same time as Mycenaean IIIC pottery; although they appear earlier in the Aegean than in Cyprus, they soon become common in both regions and in the Balkans and Italy.[786] The database does not accurately reflect the numbers and varieties of fibulae found in Cyprus, as fibulae are minimally represented in Cypriote museum collections.

Fibulae appear to be prestige items that were a foreign intrusion in the Levant, with the plain semi-circular fibula (Subtype 6III.a.vii) first introduced from the Aegean and Cyprus during the Iron Age I, after which this type gradually replaces the toggle pin.[787] One might expect that fibulae would be quite common at coastal sites in the Levant, but the evidence does not support such an expectation.[788] The paucity of fibulae in areas such as Philistia is intriguing, as it conflicts with the assumption that newcomers in the region would have brought this form eastwards with them. The limited presence of fibulae within burials may indicate that they were associated with status and wealth, or that the items of dress with which they were used were not necessary in death, or that the cultures of the Levantine coast rejected this form of attachment.[789] The situation was quite different in the Aegean, where the frequent deposition of fibulae in tombs indicates that they were votive offerings or that they had an apotropaic function; as can be inferred from the deposition of fibulae

[780] E.g., Subminoan S.38.6–7 and S.38.11–12: Catling and Catling 1980, pp. 245–246, pl. 250:1–3; Cf. Kerameikos Subminoan grave 16, and S 113, PG 22 and PG 23.45: Styrenius 1967, pp. 42, 70.

[781] Styrenius 1967, fig. 1:1–2. Also Catling 1996b, p. 525. Cf. fibulae from the Balkans: Desborough 1964, pp. 54–58.

[782] Catling and Catling 1980, pp. 234–235.

[783] *Skoubris* Tombs 40:5 and 16.28: Catling and Catling 1980, pp. 236–237, pl. 247:10.

[784] E.g., Kerameikos Tomb S108: Catling and Catling 1980, pl. 247:1. Cf. Kraiker and Kübler 1939, p. 84, pl. 28, second row, second from left.

[785] Subminoan tombs S22 and S40, and Early Protogeometric S8, and with pins in Subminoan tomb S38, and Early Protogeometric tombs S10 and S16: Catling 1985, pp. 19–20.

[786] Desborough 1964, pp. 54–58; Åström, L. 1972, p. 563.

[787] Pedde 2000; Blinkenberg 1926, p. 230; Stronach 1959, p. 182.

[788] Some Philistine material remains unpublished, e.g., a fibula from Qasile: Mazar 1985a, p. 5.

[789] Bloch-Smith 1992, p. 90.

in temple sanctuaries.[790] Although seals could be suspended from toggle pins or necklaces during the Late Bronze Age–Iron Age, a find from a Late Iron Age tomb at Meqabelein demonstrates that fibulae could also be used to attach seals to the upper body.[791]

4.10.7 Category 7: Foil Ornaments

In most cases, I classify all long narrow strips of metal as diadems (Subtypes 7I.a and 7I.b) and all short lentoid shapes as mouthpieces (Subtypes 7II.c and 7II.d). However, it can be difficult to distinguish between the two forms when they are not found *in situ*, as lentoid diadems and rectangular mouthpieces are occasionally found *in situ*.[792] In Cyprus, ornaments of delicate sheet or foil gold would have been unusable in daily life due to their fragility, so they no doubt had some religious significance when they were used in ritual settings. Nonetheless, representational media demonstrates that individuals could wear diadems in life.[793] In the Aegean, scholars interpret some of the decorative motifs used on foil ornaments, such as bucrania, double axes, and figure-of-eight shields, as religious or ritual symbols.[794]

Diadems are a universal symbol of rank and have a long history of use in the Near East.[795] The earliest gold diadems come from third millennium BCE Ur.[796] In the southern Levant, foil ornaments mainly date from the Late Bronze Age and occur only rarely in the Early Iron Age. While these artefacts might reflect Aegean burial practices,[797] diadems from the Levant are sturdier in construction than their fragile Aegean and Cypriote counterparts; this sturdiness suggests that diadems were worn in life as well as in death. In addition, the few mouthpieces discovered in the southern Levant lack the detailed ornamentation of Aegean and Cypriote examples, with decorative elements typically limited to lightly chased lines and dots. These ornaments are often associated with other non-Levantine material; for example, at Azor they occur alongside Cypro-Phoenician juglets, cremation burials, and *brachycephalic* skull types.[798] At Far'ah, foil ornaments are part of a mortuary kit associated with high-ranked burials, along with decorative fittings, metal vessels, toggle pins, and objects linked to Canaanite ritual, such as crescent pendants, chalices, rattles, and pomegranate vessels.[799] While most Late Bronze Age II–Iron Age I foil ornaments are made of gold, one example from Achziv dated to the 11th century BCE is of silver;[800] this latter piece may

[790] Muscarella 1967, pp. 85–86.
[791] Lankester-Harding 1950, pl. 13:2; Tufnell 1953, p. 392. Cf. Stronach 1959, p. 204; Muscarella 1967.
[792] E.g., Late Cypriote IIC Tomb 18 at Enkomi contained a diadem and a mouthpiece *in situ*: Gjerstad *et al.* 1934, p. 546.
[793] Doumas 1992, p. 167, pl. 130.
[794] Marinatos 1986, pp. 51–72; Rehak and Younger 2001, pp. 437–438.
[795] E.g., at Ur: Woolley 1934, pl. 219; Alaca Höyük: Arık 1937, p. 244.
[796] Woolley 1934, pp. 195–198, 241–242, pls. 146:484 and 147; Maxwell-Hyslop 1960; Maxwell-Hyslop 1971, pp. 17–18, pls. 1–3:68–69 and 46–47.
[797] Dothan, T. 1989.
[798] Dothan, M. and T. Dothan 1992, pp. 112–113.
[799] Braunstein 2011, pp. 15–16.
[800] Mazar 2001, fig. 5:5.

reflect local adaptation of the Aegean tradition of using silver that was becoming more common in the southern Levant by the end of the Iron Age I.[801]

Within the Aegean, diadems first appear on Early Minoan Crete; some of these objects have signs of use-wear.[802] Foil ornaments of the later stages of the Bronze Age and of the Early Iron Age transition bear no resemblance to earlier prototypes, but are rather of 'Asiatic inspiration,'[803] similar to those from Late Bronze Age contexts in Cyprus;[804] perhaps diadems functioned as symbols of authority in Crete in emulation of eastern elite practices.[805] Mouthpieces in the Aegean appear to reflect Cypriote burial practices, rather than Mycenaean customs as is often claimed,[806] although examples that predate Cypriote influence are also known, such as one mouthpiece from Late Minoan IA Mavrospilio.[807] By the Early Iron Age, few foil ornaments appear in the Aegean.[808]

The tradition of using foil ornaments in Cyprus commences in Late Cypriote IA, and is most prevalent during Late Cypriote II–III. In excess of 400 Late Bronze Age diadems and mouthpieces come from Cyprus, with the bulk of these being from Enkomi.[809] Earlier examples are often undecorated, and are paralleled at Near Eastern sites such as 'Ajjul[810] and Megiddo;[811] this pattern indicates a Near Eastern rather than an Aegean origin for the tradition. Plain examples give way to decorative examples during the Late Cypriote IIA, reflecting an increase in wealth, particularly at Enkomi. Characteristic motifs include the mouth pattern on mouthpieces, Aegean spirals, Near Eastern antithetic spirals, and Egyptian double volutes and palmettes. From the Late Cypriote IIB, and particularly from the Late Cypriote IIC, Aegean motifs such as the eight-shield pattern become more prevalent due to an increase in contact between Cyprus and the Mycenaean world. At this time, the dots around the edges of the bands (familiar on Near Eastern and Early Cypriote ornaments) are eliminated, and diadems and mouthpieces are characterised by increased standardisation and complexity of design. By the Late Cypriote III, foil ornaments are not as common at sites such as Enkomi, although they still occur in large quantities at Kouklia (attesting to the importance of western Cyprus at this time).[812] By the end of Late Cypriote IIIB, the tradition of including foil ornaments in mortuary contexts is abandoned.

Type 7III plaque ornaments can be circular (roundels) or rectangular, and often have perforations through which they attach to clothing or shrouds. The most common embossed motif is the eight-petalled rosette (Subtype 7III.b). Catling claims that the rosette roundel did not

[801] Gitin and Golani 2001; Thompson 2003; 2007.

[802] E.g., Seager 1912, pp. 26–34, fig. 9; Xanthoudides 1924, p. 82, no. 389, pl. 43; Higgins 1980a, pp. 55–56; Davaras 1975, pp. 110–113. Then in the Cyclades: Renfrew 1972, p. 377, fig. 18; Caskey 1972, pp. 385–386; and on the mainland: Blegen 1938; Higgins 1980a, p. 71.

[803] Higgins 1980a, p. 87.

[804] Higgins 1980b, p. 93; Gjerstad *et al.* 1934, pl. 55; 1935, pl. 20:3.

[805] Colburn 2008, p. 214.

[806] See Brug 1985, p. 153.

[807] Forsdyke 1926–1927, pl. 18:9 B.1; Alexiou and Brice 1972, pp. 113, 116.

[808] E.g., Gjerstad 1948, p. 168, fig. 36:24–26.

[809] Åström, L. 1972, pp. 467–483. For discussion and references, see Poldrugo 2002.

[810] Negbi 1970, pl. 48:252; Maxwell-Hyslop 1971, p. 121, fig. 82.

[811] Loud 1948, p. 188, fig. 139, pl. 227:172.

[812] Catling 1968; Karageorghis 1988, pp. 804–805; Karageorghis 1990, pp. 77–85.

appear in Cyprus until the 12th century BCE, and that its reintroduction to Crete (where it had been popular in the Mycenaean period) occurred from the mid-11th century BCE;[813] furthermore, unlike Mycenaean roundels, plaques dated to Subminoan–Submycenaean have embossed motifs rather than *repoussé*. Nonetheless, some embossed rosette roundels come from Late Minoan IIIA contexts on Crete (for example, nos. 1738 and 1748). The majority of examples in this dataset come from Sellopoulo, where they lay above and below the upper body as though attached to a shroud, or perhaps along the hemline of a skirt.[814]

[813] Catling 1996b, p. 531.

[814] Catling 1996b, p. 214; Wace 1932, pp. 195–196. Cf. Late Minoan IIIA Tholos D at Phourni on Crete (Effinger 2000) and Tholos A (Sakellarakis 1966).

CHAPTER 5

FREQUENCY AND DISTRIBUTION ANALYSES

Quantitative analyses are now presented of the data that is stored within the SPSS database.[1] Measuring and quantifying variations in the stylistic traits, motifs, scale, and material within the repertoire of southern Levantine jewellery should enable the interpretation of stylistic diversity (that is, the quantitative measure of variation) within the different jewellery categories and across the different geographic regions.[2]

The sampling technique and the quality of the data collected for each jewellery category and for each geographic region is explained below, followed by a discussion of the frequencies of artefacts by jewellery category, by dimensions, and by material. Six main distribution patterns can be identified, including the distribution of (1) *artefacts by site*, (2) *artefacts by findspot and period*, (3) *categories and subtypes by site*, (4) *decorative techniques by category and site*, (5) *categories by context and region*, and (6) *categories by regional association*. It is possible to present several major observations about these frequencies and distributions.

I then use statistical analysis to generate matrices that illustrate the degree of similarity between the jewellery from the five regions (the Aegean, Cyprus, Cisjordan, Philistia, and Transjordan), and I offer some broad conclusions based on these matrices.

5.1 DATA COLLECTION AND QUALITY

5.1.1 Method of Data Collection

Data was collected on 3900 items of jewellery from the 29 sites in the dataset, using 'consecutive sampling' (also called 'non-random sampling' or 'non-probability sampling'), in which every object is taken into account.[3] There is credibility in this technique.[4] Even though this method results in unequal sample sizes, which can colour generalisations and inferences about the dataset as a whole,[5] a good representation of overall trends can be

[1] Godfrey-Smith 2003, pp. 30–33. For more information about SPSS, see http://www.spss.com/.

[2] However, richness and diversity measures can sometimes be prone to effects of sample size that potentially cloud their meaning: refer to Jones and Leonard 1989. This analytical framework has been used to explain *diversity* as an 'ethnic marker' as opposed to 'ethnicity': Killebrew 2005, p. 7. Given the nature of the assemblage (in that distinctions may not always be clear) a certain amount of intuitiveness or selectivity is required in the classification of the subject matter: see Jones and Leonard 1989, p. 3.

[3] Regarding the criteria used to select the sites, refer to Section 1.1.1.

[4] Shadish *et al.* 2008.

[5] For instance, there is no common standard error for each group mean, or a common standard error of difference for each pair of groups; these issues could be addressed by employing variance analysis (ANOVA): Keppel and Wickens 1993; or co-variance analysis (ANCOVA): Ryan 2013.

obtained by studying every object available — particularly as the primary aim is to determine similarity between regions rather than similarity between sites.

5.1.2 Data Quality by Category and Region

Category 1 (earrings), Category 3 (bangles), Category 4 (pendants), and Category 5 (beads) are discussed below under their own subheadings. Although finger and toe rings (Type 2I–2III) and hair spirals (Type 2IV) fall within Category 2 (rings), they are occasionally treated separately as they are distinctly different forms that served different functions. Pins and fibulae both fall within Category 6 (clothing attachments), but are treated separately as they too serve different functions. Diadems (Type 7I), mouthpieces (Type 7II), and plaques (Type 7III) all fall within Category 7 (foil ornaments), but are likewise often treated separately.

Table D.1 (Appendix D) shows the data quality (complete, partial, or no data) for each jewellery category across regions and for each region across jewellery categories. As the table shows, hair spirals, diadems, and mouthpieces have the highest percentage of complete data. Some jewellery categories (such as plaques) contain large numbers of artefacts with no data; that is, the artefacts can be assigned to a subtype but have no available measurements or weights.

The highest percentage of complete data for bangles comes from Philistia. The majority of beads have only partial data; most of those with complete data come from the Aegean. There are no major differences between data quality for earrings or for rings, although of the different regions, Cyprus has the most earrings and rings with complete data. Pendants occur most frequently in Cyprus, where a large percentage has complete data. There are also more pins with complete data from Cyprus than from other regions.

Most jewellery categories have the smallest amount of complete data in Cisjordan; jewellery categories in Transjordan follow a similar pattern. By contrast, jewellery categories in Cyprus have the smallest numbers of objects with no data. The situation in the Aegean is somewhat different, with varying levels of data quality for the different jewellery categories. Due to the impossibility of accessing unpublished Philistine material, the limited quantities of jewellery recovered from Ashdod, Azor, and Qasile, and the dearth of Philistine burials, Philistia is poorly represented in the catalogue. Although the number of Philistine artefacts within each jewellery category is small, it is clear that the category with the most complete data is bangles (91.6 per cent).

5.2 FREQUENCIES

5.2.1 Artefacts by Category

The figure below depicts the proportion of the 3900 artefacts that fall within the various jewellery categories:

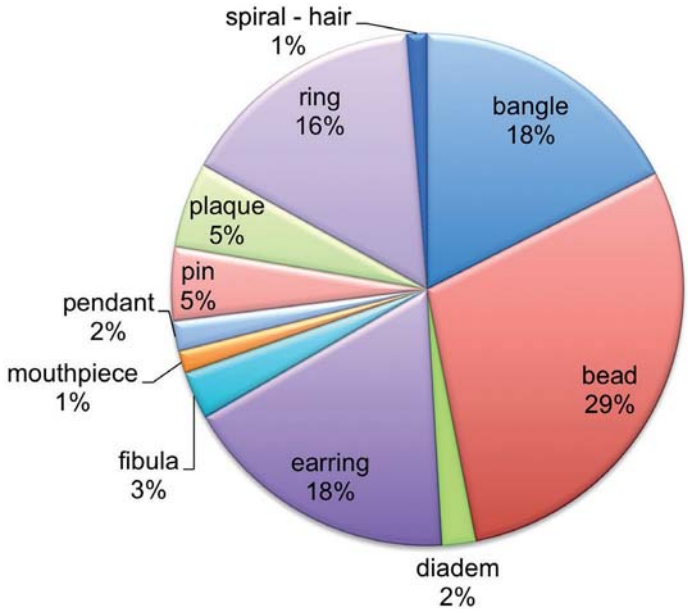

Fig. 13. Artefacts by category

Once again, diadems, mouthpieces, and plaques are treated separately, as are pins and fibulae, and rings and hair spirals. Beads are the most frequent artefact (1148), followed by earrings (687), bangles (683), and rings (611).

5.2.2 Categories by Dimensions

Table D.2 (Appendix D) shows the jewellery categories subdivided by maximum, minimum, and median measurements. The categories are arranged according to the condition of the objects: broken (meaning that the object can be reassembled), fragmentary, whole, and those objects whose information came from secondary sources and whose condition is unknown. Measurements include diameter (and estimated diameter and inside diameter for bangles and rings only), length, height, width, thickness, and weight.

Some categories of artefact lend themselves to more detailed analysis because they occur more frequently at certain sites or in certain regions (**Figs. 14–16; Tables 3–4**). These categories include earrings, bangles, rings, and pins, which occur in large quantities at several sites in the southern Levant.

1.1.1.1 Category 1: Earrings

The median measurements for earrings of all conditions (whole, broken, fragmentary, or unknown) do not differ greatly from the median measurements for whole examples alone. Width and thickness measurements are recorded for earrings, but due to the large range of subtypes, these measurements are of little statistical value.

The figure below depicts the weight ranges of whole earrings stacked by geographic region:

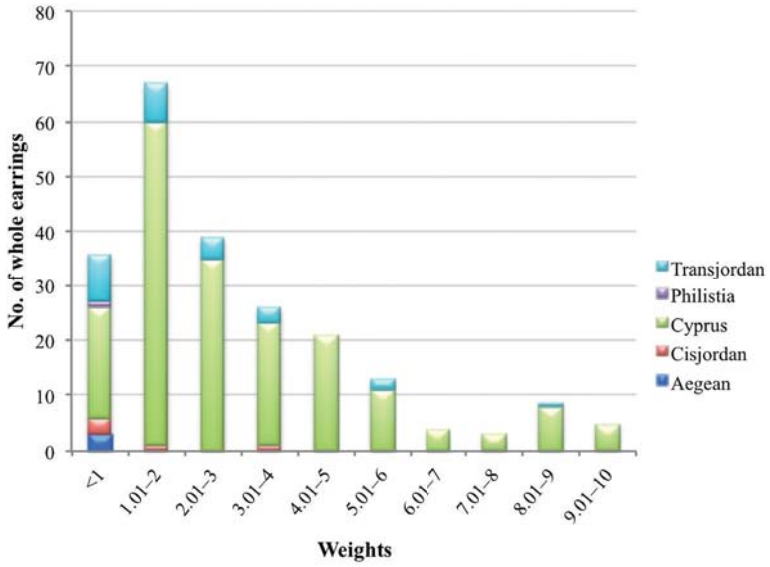

Fig. 14. Weights of whole earrings by region

The median weight of earrings is 2.2 g, but earring frequencies within the dataset are skewed in favour of Cyprus, where most earrings weigh between 1.1 and 2.0 g. As can be seen, whole earrings rarely appear in the Aegean or Philistia.

5.2.2.1 Category 2: Rings

Rings of all conditions (whole, fragmentary, broken) have a median diameter of 21.0 mm and a median weight of 3.0 g. The median dimensions for spiral hair ornaments are significantly smaller than for rings, but their median weights are larger.

The figure below depicts the weight ranges of whole rings stacked by geographic region:

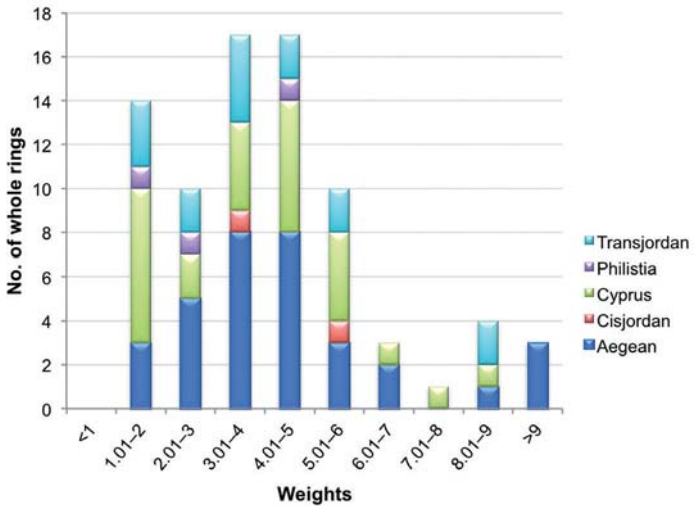

Fig. 15. Weights of whole rings by region

Few rings come from the southern Levant, and most of these weigh less than 5 g; only two rings heavier than 5 g come from Transjordan. This pattern stands in stark contrast to the preference for heavy rings in the Aegean and Cyprus, although the histogram shows that rings in these two regions appear within most weight categories.

5.2.2.2 Category 3: Bangles

Whole bangles have a median diameter of 59.6 mm; this measurement is similar whether bangles are whole, fragmentary, broken, or of unknown condition. Bangles that are whole encompass a broad range of weights but have a median weight of 21.1 g. The weight of bangles is higher in Cisjordan, especially at Nasbeh, where they weigh between 50.1 and 75.0 g and the majority are greater than 80 mm in diameter, perhaps as they functioned as both anklets and as weights.[6]

The figure below depicts the weight ranges of whole bangles stacked by geographic region:

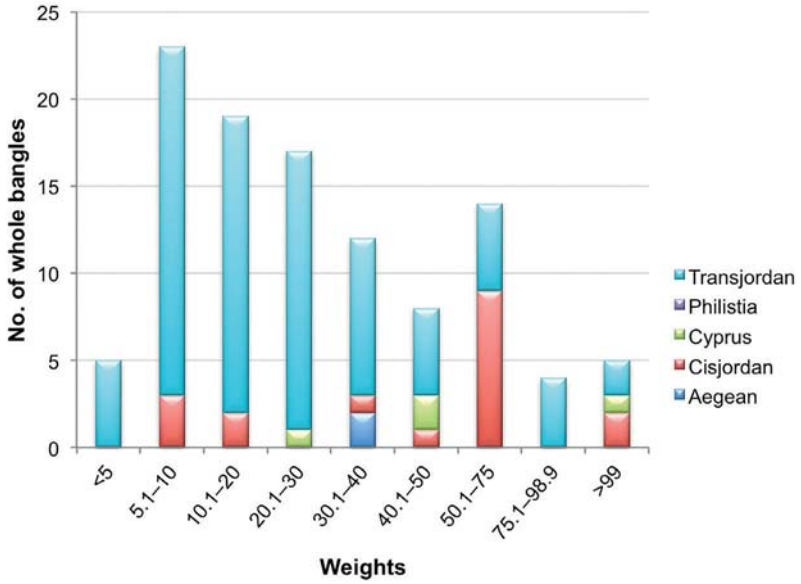

Fig. 16. Weights of whole bangles by region

As can be seen, a large quantity of bangles from Transjordan fall in the 5.1–10.0 g weight range, with progressively smaller numbers in larger weight ranges. There is a noticeable concentration of bangles in the 50.1–75 g weight range in Cisjordan. Few bangles come from Cyprus and they are rare in the Aegean.

The table below shows the distribution of bangle diameters by site for bangles of all conditions:

[6] Brody and Friedman 2007, pp. 103–104.

SITE	<48.0	48.0–54.0	55.0–65.0	66.0–79.0	>80.0
Ashdod	.	.	1	.	.
Azor	.	2	.	.	.
Baq'ah Valley	.	3	.	.	1
Beth Shean	.	.	.	.	2
Deir 'Ain 'Abata	3	.	.	.	.
Eitun	8	.	.	3	3
Ekron	.	.	.	1	.
Enkomi	.	.	1	2	8
Far'ah	26	13	16	10	2
Gath	2	1	1	.	.
Kouklia	.	.	.	.	2
Marmáriane	1	2	.	.	.
Maroni	.	1	.	.	.
Megiddo	3	.	1	.	.
Nasbeh	4	5	8	13	28
Perati	.	.	1	.	1
Qasile	.	.	.	1	.
Sa'idiyeh	.	.	2	5	.
Sahab	26	21	11	22	9
Taiyiba	2	3	7	2	2
Total	**75**	**51**	**49**	**59**	**58**

Table 3. Bangle diameters by site

The columns separate bangles into diameter ranges that correspond to different functions: (1) <48 mm = infant bangle, (2) 48–54 mm = child bangle, (3) 55–65 mm = adult bangle, (4) 66–79 mm = adult bracelet/armlet, and (5) = >80 mm = adult anklet. That bangles from Cisjordan are heavier than those from Philistia and Cisjordan (as represented in **Fig. 16**) is predominantly due to the preference for large bangles at Nasbeh, which has 28 units greater than 80 mm in diameter.

The median diameter of 57 mm (see **Table D.2**) indicates that the majority of bangles functioned as bracelets rather than anklets (diameters greater than 80 mm being more likely for an adult anklet).[7] Although Table 3 demonstrates that the greatest numbers of units in fact come from Sahab and Far'ah, the smaller diameter of these bangles indicates that the majority are bracelets, and that adornment traditions at these sites differed from those at Nasbeh.

[7] Refer to Section 4.5.

5.2.2.3 Categories 4 and 5: Pendants and Beads

The majority of beads have a circular section with a median diameter of 6.4 mm. The median length is 10.0 mm and the median weight is 1.2 g; as weights sometimes correspond to multiple units for a single registration entry, they are slightly skewed in excess of the true median. The sample includes only 68 pendants, which have a median height of 20.5 mm and a median weight of 1.1 g. There are no distinguishing patterns in object dimensions between the geographic regions.

5.2.2.4 Category 6: I–II: Pins

This group consists of Type 6I Levantine toggle pins and Type 6II Aegean dress pins. The median dimensions for pins of all conditions are similar; these dimensions include a median length of approximately 89.0 mm, a median thickness of 5.9 mm, and a median weight of 5.5 g.

The table below shows the distribution of Type 6I (toggle) and Type 6II (dress) pins by region:

REGION	TYPE	STATISTIC	LENGTH	THICKNESS	WEIGHT
Aegean	Dress	Minimum	12.0	3.0	1.5
		Maximum	300.0	17.0	41.4
		Median	131.2	5.9	8.8
Cisjordan	Toggle	Minimum	11.5	2.0	2.1
		Maximum	155.0	11.0	46.9
		Median	106.0	8.0	30.7
Cyprus	Toggle	Minimum	5.95	2.0	1.7
		Maximum	132.0	11.0	26.1
		Median	70.0	4.5	5.6
	Dress	Minimum	12.1	0.1	0.2
		Maximum	108.4	4.5	3.9
		Median	66.0	1.8	1.8
Philistia	Toggle	Minimum	96.0	8.0	.
		Maximum	96.0	8.0	.
		Median	96.0	8.0	.
Transjordan	Toggle	Minimum	32.2	3.3	1.8
		Maximum	110.4	13.1	36.2
		Median	56.6	5.5	6.0

Table 4. Pin dimensions by region and type

As can be seen, toggle pins occur in all regions other than the Aegean, but the pins from Cisjordan have larger median dimensions than those from other regions. Dress pins occur in both the Aegean and Cyprus, but pins in the Aegean have considerably larger median dimensions.

5.2.2.5 Category 6.III: Fibulae

Whole fibulae have a median length of 52.0 mm, a median height of 34.5 mm, and a median weight of 7.3 g. Due to the small sample from outside the Aegean, no distinguishing patterns in object dimensions are identifiable between the geographic regions.

5.2.2.6 Category 7: Foil Ornaments

This group includes diadems, mouthpieces, and plaque ornaments. Diadems have a median length of 138.0 mm, a median width of 20.0 mm, and a median thickness of 0.2 mm. The median weight for this category is 3.6 g. Mouthpieces are usually shorter, wider, and lighter than diadems, having a median length of 104.0 mm, a median width of 33.4 mm, and a median thickness of 1.1 mm. The median weight for mouthpieces is 3.0 g. The final group of foil ornaments, plaques, appear in rectangular or circular forms. Circular plaques have a median diameter of 24.1 mm, while rectangular plaques have a median height of 26.0 mm and a median width of 27.0 mm. The median thickness for both styles of plaque is 0.02 mm and their median weight is 0.1 g. Due to the small sample from the southern Levant, no distinguishing patterns in object dimensions are identifiable between that region and the Aegean and Cyprus. In fact, no foil ornaments come from Transjordan, only one foil ornament comes from Philistia, and a total of 13 foil ornaments come from Cisjordan. The majority of diadems (78) and mouthpieces (50) come from Cyprus, while the majority of plaques come from the Aegean (182).

5.2.3 Categories by Material

Tables in Appendix D show the categories (**Table D.3**) and their subtypes (**Tables D.4.a-i**) subdivided by material. The figure below presents a summary of these findings:

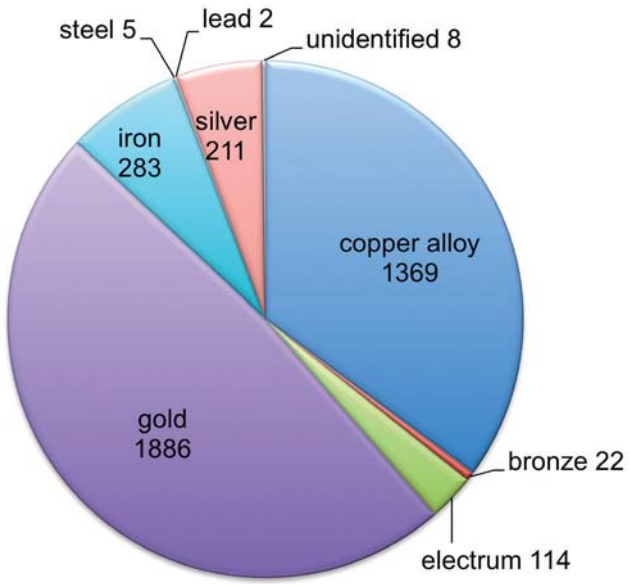

Fig. 17. Artefacts by material

This figure shows that more artefacts in the dataset are made of gold than of any other material (48.4 per cent), followed by artefacts of copper alloy (35.1 per cent). Far fewer artefacts are made of other metals.

5.2.3.1 Category 1: Earrings

Earrings are most commonly made of gold (45.6 per cent), with examples across most subtypes (**Table D.4.a**). The second most popular metal for earrings is copper alloy (41.5 per cent) — usually appearing in the form of an elongated lunate Subtype 1I.b. Only two earrings of iron are recorded in the dataset, but as iron objects are particularly vulnerable to degradation, this may be the result of a lack of preservation in the archaeological record.

5.2.3.2 Category 2: Rings

As is the case with most jewellery categories other than beads and pendants, rings are most commonly made of copper alloy (approximately 53 per cent) (**Table D.4.b**). A substantially smaller range of subtypes is of gold, silver, or iron. Rings of gold commonly include decorative techniques such as engraving (subtype 2III.d). Silver and iron examples tend to be simple forms, such as open-ended plain rings with a circular (Subtype 2I.b.i) or flat (Subtype 2I.b.iv) section. When spiral hoops are classified as hair ornaments rather than finger rings (**Table D.4.c**), they typically occur in gold (80 per cent).

5.2.3.3 Category 3: Bangles

Bangles are most often made of copper alloy (68.2 per cent) (**Table D.4.d**); in fact, copper alloy bangles constitute approximately 12 per cent of the entire database. The second most popular metal for bangles is iron (27.5 per cent). The most common copper alloy and iron bangle subtype is an open-ended or overlapping bangle with a circular cross-section and tapered terminals (Subtypes 3II.b and 3III.b). The position of a bangle's terminals, whether overlapping, abutting, or parted, is of limited stylistic and hence typological value, since these objects would have been adjusted to fit the individuals who wore them.[8]

Bangles are sometimes found *in situ*, making it possible to determine their function with certainty. The table below shows the frequency of bangle forms by material:

[8] Tubb 2012, p. 101.

BANGLE FORM		Copper alloy	Copper alloy - bronze	Gold	Iron	Iron steel	Metal unident.	Silver	Total
Anklet	Sum	47	.	.	1	.	.	.	48
	Sum %	6.9%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	7.0%
Bracelet	Sum	67	1	.	16	.	.	1	85
	Sum %	9.8%	0.1%	0.0%	2.3%	0.0%	0.0%	0.1%	12.4%
Unknown	Sum	352	15	3	171	2	2	5	550
	Sum %	51.5%	2.2%	0.4%	25.0%	0.3%	0.3%	0.7%	80.5%
Total	**Sum**	**466**	**16**	**3**	**188**	**2**	**2**	**6**	**683**
	Sum %	**68.2%**	**2.3%**	**0.4%**	**27.5%**	**0.3%**	**0.3%**	**0.9%**	**100.0%**

Table 5. Frequency of bangle forms by material

This table shows that iron is mainly associated with bracelets rather than anklets, although the function of a large number of iron bangles is unknown.

5.2.3.4 Category 4: Pendants

Pendants, like beads, are usually made of gold (77 per cent) (**Table D.4.e**). The small number of units within each subtype makes it difficult to identify any further trends based on this table alone, though it is worth pointing out that the most common subtype in the southern Levant is the crescent pendant made of copper alloy, electrum, or gold (Subtype 4IV.a).

5.2.3.5 Category 5: Beads

Beads are usually made of gold (87 per cent) (**Table D.4.f**), and represent 29.4 per cent of the total dataset. These beads include large quantities of hollow circular barrels (Subtypes 5III.a–b), hollow circular oblates (Subtype 5II.a), circular convex bicones (Subtype 5IV.b), circular granular cylinders (Subtype 5V.b), and coiled cylinders (Subtype 5V.g).

5.2.3.6 Category 6.I–II: Pins

Pins include the greatest variety of subtypes in this dataset. The most common pins are made of copper alloy (71.8 per cent) (**Table D.4.g**), and the most popular forms are plain and decoratively incised stake pins (Subtypes 6I.a.ii and 6I.b.vi). A scatter of gold pins is also included in the dataset, as well as several iron dress pins — although no dress pins come from the southern Levant.

5.2.3.7 Category 6.III: Fibulae

The majority of fibulae are made of copper alloy (approximately 89 per cent) (**Table D.4.h**). Of these fibulae, most are plain arched bow styles with large springs (Subtype 6III.b.ii); these styles are followed in popularity by semi-circular bow fibulae with rhomboid or twisted sections (Subtypes 6III.a.iv and vi).

5.2.3.8 Category 7: Foil Ornaments

Foil ornaments in the form of diadems, mouthpieces, or plaques are nearly always made of gold (**Table D.4.i**). The majority of these ornaments are rosette plaques (Subtype 7III.a.ii), which often appear in large quantities within the same contexts.

5.3 DISTRIBUTIONS

5.3.1 Artefacts by Site

The figure below shows the distribution of artefacts by site:

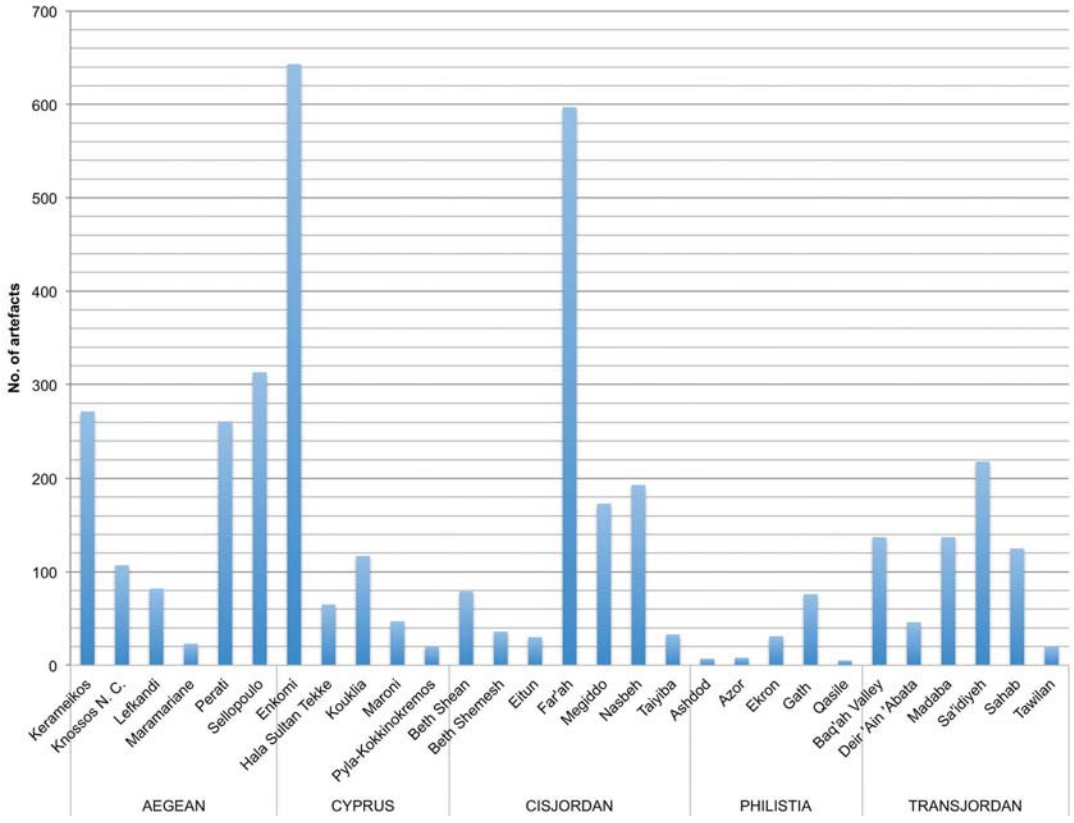

Fig. 18. Distribution of artefacts by site

This figure shows that the sample sizes from Enkomi in Cyprus and Far'ah in Cisjordan are especially large: Enkomi has 643 units and Far'ah has 598 units. Despite the resulting bias in the distribution, data from the two sites is still useful for establishing trends within their geographic regions.

5.3.2 Artefacts by Findspot and Period

Tables D.5–D.9 show the distribution of artefacts by findspot and chronological period, while Table D.10 shows the distribution of jewellery categories by region and chronological period.

Within the Aegean, metal beads do not appear after the Submycenaean period, rosettes do not appear after the Subminoan, bangles are extremely rare, and earrings are limited across all periods. Rings are the only category in the Aegean to appear within all chronological periods, although they are most prevalent in loci dated to the Submycenaean period. The largest numbers in Cyprus within all periods occur in the category of beads. Unlike in the Aegean, the next largest category in Cyprus is earrings. Also dissimilar to the Aegean, plaque rosettes in Cyprus occur in later rather than earlier periods. Fibulae occur frequently from the Submycenaean period in the Aegean, while in Cyprus, the paucity of fibulae in the dataset does not accurately reflect their popularity.[9]

The distribution of subtypes in the southern Levant is markedly different from the distribution of subtypes in the Aegean and Cyprus, and little distinguishes the adornment trends of Philistia, Cis-, and Transjordan. Bangles are the most common jewellery category, with the greatest number appearing in Iron Age I contexts. Earrings are second in popularity, although the discrepancy between the Iron Age I and IIA is even greater than it is for bangles. Rings also appear in large quantities, with the trend for larger quantities in the Iron Age I persisting. The rarest items in the southern Levant are foil ornaments in any of their forms (diadems, mouthpieces, or plaques); these ornaments occur in only small numbers in Iron Age I contexts in Cisjordan and not at all in Transjordan. Fibulae likewise occur in small numbers at Early Iron Age sites in Philistia and Cisjordan, and once again, not at all in Transjordan.

Investigating the distribution of artefacts by chronological period *across all regions* is complicated by the fact that artefacts from different regions are dated according to different chronologies, each with its own nomenclature (see **Table 1**). To overcome this difficulty, the main period covered by this volume (1200–900 BCE) was divided into two phases:

- Phase 1: *ca.* 1200–1000 BCE (corresponding to the Iron Age I)
- Phase 2: *ca.* 1000–900 BCE (corresponding to the Iron Age IIA)

The artefacts in the database were then classified according to phase, with Late Bronze Age artefacts (particularly common in the Aegean and Cyprus) classified as 'Pre-Phase 1,' and objects dated to a non-specific range in the Early Iron Age as the result of poor stratigraphic information classified as 'Multi-Phase.'

[9] Giesen 2001.

The results are shown in Table D.11. The table indicates that nearly a quarter of the corpus is classed as Multi-Phase and thus cannot be used to distinguish between the Iron Age I and Iron Age IIA. In the Aegean, a large number of artefacts date to either Pre-Phase 1 or Phase 1. The chronological attribution of artefacts is less clear in Cyprus, as although the majority of artefacts date to Pre-Phase 1, a substantial proportion is classed as Multi-Phase. In the southern Levant, extremely few artefacts date to Pre-Phase 1, simply because Late Bronze Age Levantine artefacts fall outside the scope of the database. As discussed in Chapter 3, Late Bronze Age artefacts from the Aegean and Cyprus are included in the database only to assist in determining whether styles from those regions may have travelled eastward and influenced adornment practices in the southern Levant from the start of the Early Iron Age.

Table D.12 shows the various jewellery categories tabulated by chronological phase. In this table, the largest group of objects is Pre-Phase 1 beads (12.8 per cent of the total corpus). Phase 1 beads, earrings, and rings comprise 12 per cent, 8.5 per cent, and 8.4 per cent of the corpus, respectively. Phase 1 bangles and Multi-Phase bangles are similarly common at 7.7 per cent and 7.2 per cent. Significant proportions of the corpus also consist of Multi-Phase earrings and rings (4.7 per cent each), and Pre-Phase 1 plaques (4.6 per cent).

5.3.3 Categories and Subtypes by Site

Table D.13 (Appendix D) shows the distribution of categories by site. Once again, as mentioned earlier, diadems, mouthpieces, and plaques are treated separately, as are pins and fibulae, and rings and hair spirals.

The following figure shows the distribution of different categories in the Aegean:

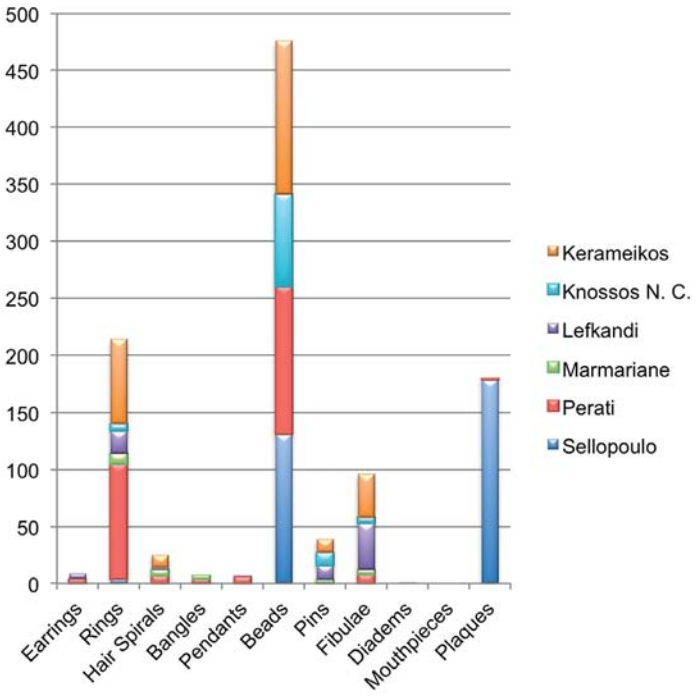

Fig. 19. Distribution of categories by site in the Aegean

This figure clearly demonstrates the popularity of beads in the Aegean, and the paucity of bangles, diadems, earrings, mouthpieces and pendants.

The figure below illustrates the popularity of beads, bangles, earrings, and rings in Cisjordan:

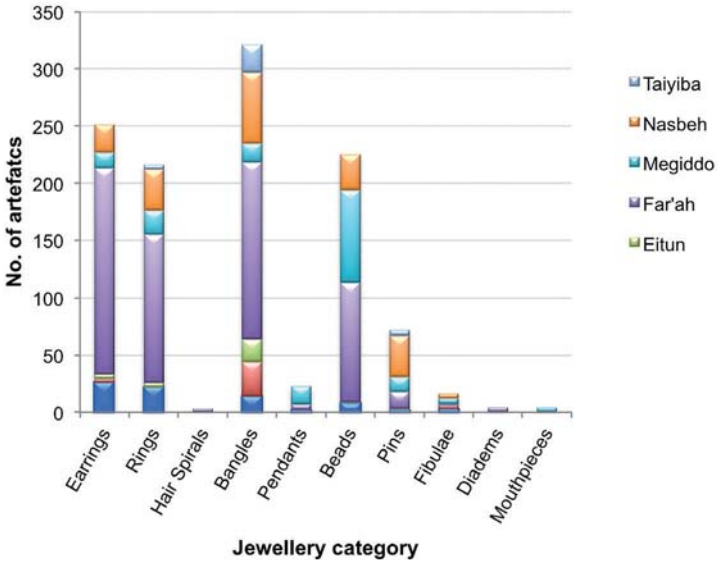

Fig. 20. Distribution of categories by site in Cisjordan

This figure shows that there is also a noticeable paucity of foil ornaments in this region.

The figure below reflects the popularity of beads and earrings in Cyprus:

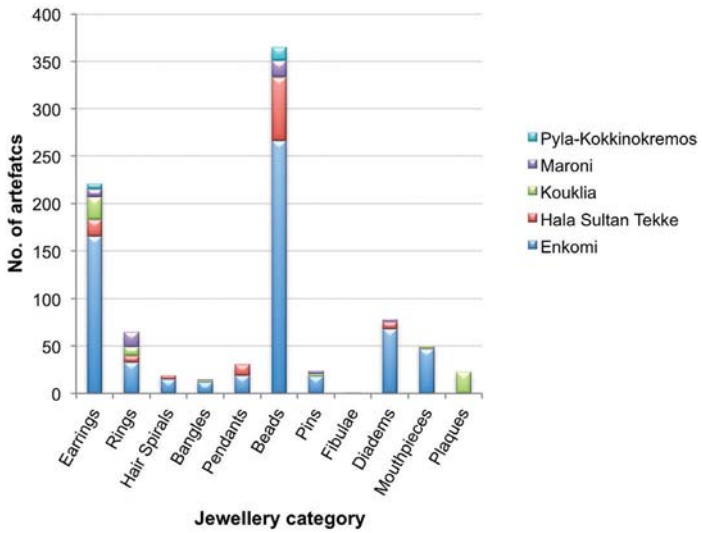

Fig. 21. Distribution of categories by site in Cyprus

This figure illustrates the rather more even distribution of categories of jewellery in Cyprus other than fibulae, which were poorly represented in the database.

The figure below shows the preference for bangles in Philistia and (to a lesser degree) for earrings and rings:

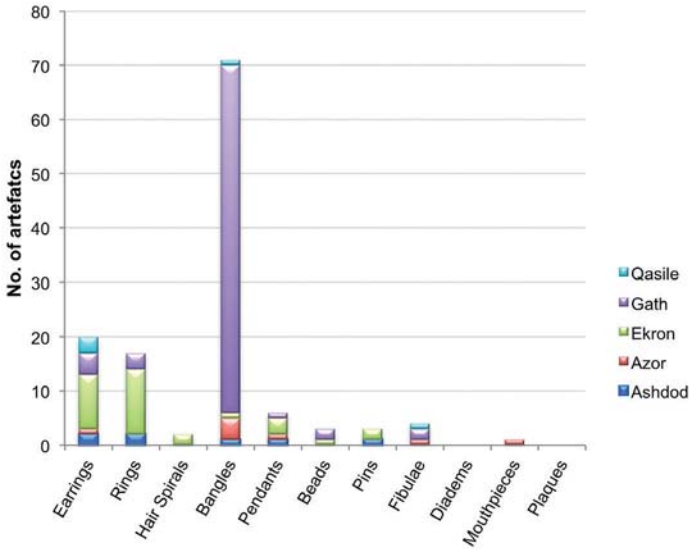

Fig. 22. Distribution of categories by site in Philistia

As in Cisjordan, this figure shows that there is also a noticeable paucity of foil ornaments in Philistia.

The figure below shows that bangles, earrings, and rings were also the most popular categories of jewellery in Transjordan:

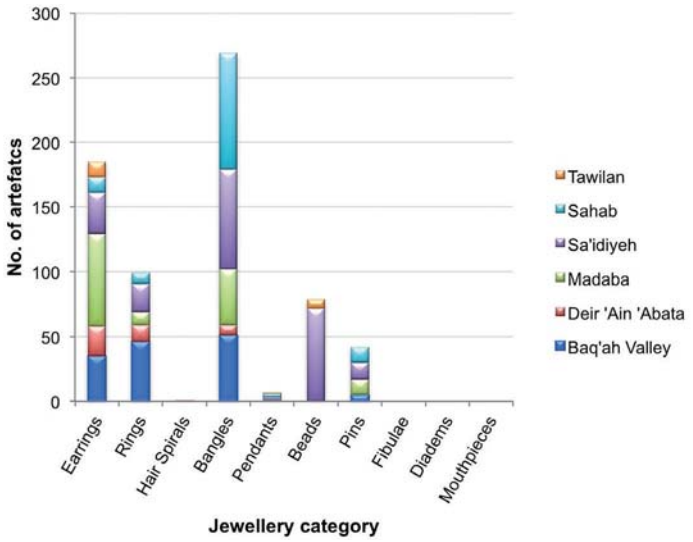

Fig. 23. Distribution of categories by site in Transjordan

This figure shows that foil ornaments and fibulae are absent from Transjordan.

The figures for Cis- and Transjordan illustrate the similarities between these regions. In Cisjordan, bangles are most numerous, followed by earrings, and then by rings. Transjordan also yielded more bangles than other jewellery categories, followed by rings, and then earrings. A similar pattern occurs in Philistia but at a much-reduced scale, which says more about the relatively small size of the sample than about adornment practices in that region. In each of these three regions, foil ornaments are lacking or appear in extremely limited numbers; there is also a paucity of fibulae in the southern Levant.

Different patterns emerge in the Aegean and in Cyprus. The data from the Aegean reflects the popularity of finger rings, followed by fibulae, and to a lesser degree by pins. Cyprus, by contrast, has a more diverse mix of jewellery categories, although earrings are clearly popular. Cyprus and the Aegean both differ from the southern Levant in their paucity of bangles, and their relative abundance of foil ornaments in the form of diadems, mouthpieces, and plaques.

Table D.13 also demonstrates that rings occur at most sites across the eastern Mediterranean (24 of 29 sites), but while earrings come from the same number of sites, only Lefkandi and Perati in the Aegean yielded any earrings. Bangles, like rings, occur in very limited quantities in the Aegean; the examples in the dataset come from Perati and Marmáriane, with the latter site being assigned a date in the Protogeometric period. Few bangles in this dataset occur in Cypriote contexts. Bangles are common in the southern Levant, where they most frequently come from Far'ah; however, large quantities also come from Gath, Nasbeh, Sahab, and Sa'idiyeh.

The largest category in Table D.13 is beads, which accounts for over 29 per cent of the total dataset. These objects come mainly from several burial contexts containing large numbers of beads that were once strung together as necklaces.

Tables D.14–D.21 show the distribution of category subtypes by site. One of the few developments local to the southern Levant during the Iron Age I period (other than the introduction of iron in the manufacture of jewellery) is the appearance of new forms of bud/tassel earrings (Subtypes 1II.d–f) that are often found in association with either *Sea Peoples* or elite paraphernalia.[10] Only a few jewellery subtypes occur within all five regions, such as plain open-ended or overlapping rings (Subtypes 2I.b.i and 2I.c.i), overlapping rings with a plano-convex section (Subtype 2I.c.v), and open-ended bangles with tapered terminals (Subtype 3II.b). Rings with bezels are also common across the eastern Mediterranean (especially Subtypes 2III.b and d).

Spectacle-spiral pendants (Subtype 4IV.c) occur in all regions other than Philistia, and crescent pendants (Subtype 4IV.a) and disc pendants (Subtype 4IV.d) occur in all regions other than Transjordan. Oblate beads of plain sheet-metal (Subtype 5II.a) also appear in all regions other than Transjordan (although the simplicity of these beads renders them of little interpretative value).

[10] Refer to Chapter 6.2.1.

5.3.4 Decorative Technique by Category and Site

The objects in the database display a range of decorative techniques, including chasing, *cloisonné*, coiling, embossing, engraving, *en pointillé*, filigree, fluting, gadrooning, granulation, *repoussé*, ribbing, and twisting. The table below shows the distribution of decorative techniques by jewellery category and site:

	Assorted	Beaded	Bossed	Cloisonné	Coiled	En pointillé	Filigree	Flat	Fluted	Gadrooned	Granulation	Grooved	Incised	Inset	Molded	Repoussé	Ribbed	Twisted	Plain	Total
Kerameikos	Y				Y	Y							Y			Y	Y	Y	Y	**8**
Knossos N. C.		Y	Y			Y									Y	Y			Y	**6**
Lefkandi			Y		Y	Y							Y				Y	Y	Y	**7**
Marmáriane	Y				Y														Y	**3**
Perati			Y		Y	Y					Y	Y	Y			Y		Y	Y	**9**
Sellopoulo				Y	Y						Y		Y			Y			Y	**6**
Enkomi			Y		Y	Y	Y	Y	Y		Y	Y	Y	Y		Y	Y	Y	Y	**14**
Hala Sultan T.	Y				Y	Y					Y	Y	Y	Y		Y	Y	Y	Y	**11**
Kouklia		Y	Y			Y										Y	Y		Y	**6**
Maroni									Y		Y	Y	Y	Y		Y	Y		Y	**8**
Pyla-Kokk.						Y					Y					Y	Y		Y	**5**
Beth Shean	Y										Y		Y			Y	Y		Y	**6**
Beth Shemesh	Y																Y		Y	**3**
Eitun						Y							Y						Y	**3**
Far'ah	Y		Y			Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	**14**
Megiddo	Y				Y						Y	Y	Y	Y		Y	Y		Y	**9**
Nasbeh	Y												Y	Y			Y		Y	**5**
Taiyiba					Y	Y							Y				Y		Y	**5**
Ashdod																			Y	**1**
Azor													Y			Y			Y	**3**
Ekron					Y								Y	Y			Y		Y	**5**
Gath					Y								Y					Y	Y	**4**
Qasile																			Y	**1**
Baq'ah Valley					Y								Y				Y		Y	**4**
D. 'Ain 'Abata					Y				Y										Y	**3**
Madaba									Y				Y				Y	Y	Y	**5**
Sa'idiyeh											Y		Y	Y			Y		Y	**5**
Sahab									Y				Y				Y		Y	**4**
Tawilan							Y				Y								Y	**3**

Table 6. Distribution of decorative technique by category and site

In this table, each column represents a particular decorative technique and is marked with 'Y' if that technique appears at a particular site. The table shows some clear patterns of concentration in the use of these decorative techniques. Sites that utilise the broadest range of techniques are Enkomi and Far'ah, although these results are biased in that both sites also yielded the largest quantities of Early Iron Age jewellery. Hala Sultan Tekke, Megiddo, and Perati also demonstrate a wide range of decorative styles, which can be attributed to their moderately-sized assemblages. Other sites with large assemblages, such as Sa'idiyeh and Sellopoulo, do not demonstrate the same range of techniques. In the case of Sa'idiyeh, this can only be explained by a preference for simple forms made of metal rods, such as rings, bangles, earrings, and pins, with decorative techniques used mainly on a limited number of incised or ribbed pins, and granulated beads. Sellopoulo demonstrates a broader range of techniques, such as beads decorated with granulation or *repoussé*, and rings decorated with coiled wire, engraving, or *cloisonné*, but the majority of decorative objects at Sellopoulo consists of a large number of embossed rosettes from just two burials.

Sites with the smallest range of decorative techniques include the Philistine sites of Ashdod, Azor, and Qasile. Such a result is to be expected, given the small numbers of artefacts from those sites: nine, eight, and five, respectively. Beth Shemesh in Cisjordan also demonstrates a preference for undecorated items, other than flowerbud earrings dated to the terminal Late Bronze Age and the occasional moulded fibula. Somewhat larger assemblages at Ekron and Gath result in an increased concentration of decorative techniques at those sites. Decorated objects from Ekron include rings with engraved motifs, a spiral ring, an inset bezel, a ribbed toggle pin, and a chased leaf pendant, while those from Gath include a coiled bead, an incised crescent pendant, and a twisted bangle fragment.

Mapping decorative techniques to materials reveals a clear preference for undecorated copper alloy forms amongst most jewellery categories. The most common technique on copper alloy objects is incised decoration, while the most common technique on gold objects is *repoussé*, followed by granulation. The manipulation of gold wire to create coiled objects, particularly earrings, hair ornaments, and beads, is also popular. Categories that display the broadest range of decorative practices are rings, earrings, and to a lesser extent, beads.

Objects decorated with granulation occur in greatest numbers at the chronologically and geographically diverse sites of Enkomi (Late Bronze Age), Far'ah (Iron Age I–IIA), and Tawilan (Iron Age). The application of filigree is much less common, but intriguingly occurs at the same three sites. Punctation, or *en pointillé*, appears at disparate locations and in different categories of jewellery. The largest number of artefacts decorated *en pointillé* consists of rings from Kerameikos and foil ornaments from Enkomi. In the southern Levant, artefacts decorated *en pointillé* include a small number of bangles. The related technique of *repoussé* most commonly occurs in Cyprus, although it also occurs in the Aegean, and occasionally in the southern Levant. By contrast, ribbing and beaded mouldings are much more common in the southern Levant. Likewise, incised decoration is prevalent in the southern Levant and in Cyprus, but is rarely found in the Aegean.

5.3.5 Categories by Context and Region

Table D.22 (Appendix D) shows the distribution of categories by context and region. The figure below summarises that table for the corpus as a whole:

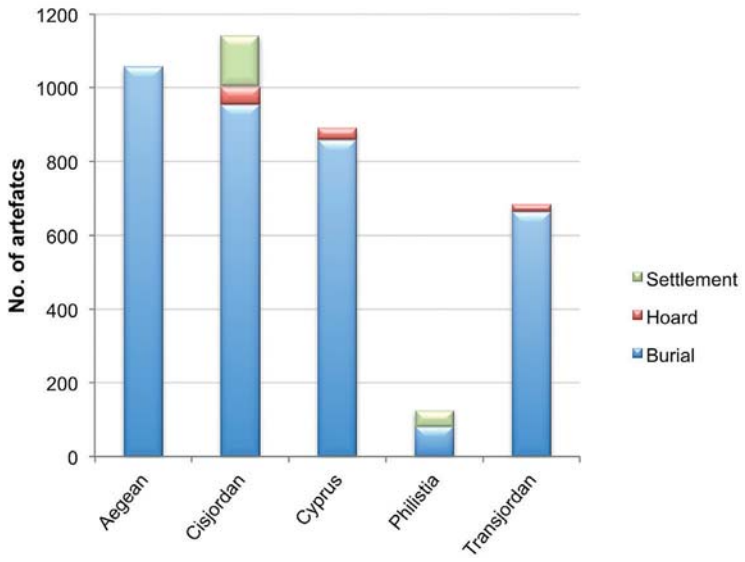

Fig. 24. Distribution of artefacts by context and region

This figure shows that in this dataset (as in collections in general), the overwhelming majority of jewellery comes from tombs. Though some of these objects (such as mouthpieces) were probably manufactured for burials, other objects clearly were not. Microscopic analysis of Late Bronze Age jewellery from Cyprus, for example, demonstrates that objects of a more sturdy nature, such as rings and hairpins, show signs of use-wear.[11] The situation is less clear with metal jewellery from the southern Levant, which is often in such a poor state of preservation that opportunities for use-wear analysis are rare.[12] Finds from settlement contexts are not only fewer than those from mortuary contexts, but they typically appear to consist of items that people have lost rather than deliberately deposited; often these items are beads, but they are occasionally earrings and pendants.

[11] Goring 1989, p. 103; 1996, pp. 29, 32; Keswani 2004, p. 138. The same occurs in Prepalatial Crete, where foil ornaments decorated with *repoussé* from Mochlos show evidence of use-wear and repair, signifying their use in daily life: Davaras 1975, p. 101; Seager 1912, p. 34, fig. 12: II.41.

[12] One example is a Late Bronze Age female buried at Ashkelon with adornment objects that show no sign of use-wear: Brody 2008, pp. 523, 530.

5.3.6 Categories by Regional Association

Artefacts are attributed a regional association according to the prevalence of subtypes within a particular region. For instance, objects that only occur in the Aegean have an *Aegean* attribution; objects that appear along the Levantine coast have a *coastal* attribution; objects that occur across all regions have an *eastern Mediterranean* attribution, and so on. Each observation in Catalogue B is individually assigned a regional association; this information is drawn together in Table D.23 (Appendix D). The figure below summarises that table for the corpus as a whole:

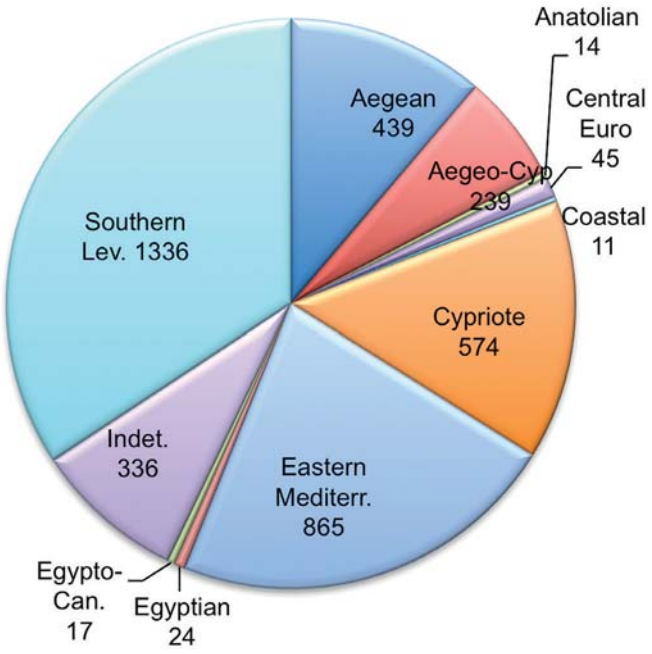

Fig. 25. Distribution of artefacts by regional association

As can be seen, a large proportion of jewellery in the dataset (857 items, or 22 per cent of the total corpus) has an eastern Mediterranean association. Other regions strongly associated with jewellery are Cyprus (14.7 per cent) followed by the Aegean (11.3 per cent). These two regions also share many adornment practices, with Aegeo-Cypriote forms totalling 6.1 per cent of the corpus. However, a large minority of the database derives from sites in the southern Levant (1343 units = 34.4 per cent), and adornment patterns in that broad region appear to have a local association. Within this group, few indicators of diversity can be seen other than a small range of objects with non-local associations. The table below shows the frequency of artefacts in the southern Levant (Cisjordan, Transjordan, and Philistia) with non-local associations (excluding artefacts with a general 'eastern Mediterranean' association):

	Bangle	Bead	Earring	Fibula	Mouthpiece	Pendant	Pin	Plaque/ Diadem	Ring	Hair spiral	Total
Aegean	1			15			2	1	1		20
Aegeo-Cypriote								3			3
Anatolian								3	12		15
Central European	19					2			2		23
Cypriote		1	1		5				1		8
Egyptian									15		15
Egypto-Canaanite						2			14		16
Total	**20**	**1**	**1**	**15**	**5**	**4**	**2**	**7**	**45**	**0**	**100**

Table 7. The frequency of artefacts with non-local associations in the southern Levant

As the table shows, the dataset for this volume contains just 100 items from the southern Levant that are influenced by Aegean, Anatolian, Cypriote, Egyptian, or central European adornment practices.

5.4 OBSERVATIONS

The following observations can be made about the frequencies and distributions discussed in the preceding sections:

- Earrings (Category 1) constitute a large part of the database, and in the southern Levant, they closely follow bangles in popularity. The majority of earrings from the Levant are made of copper alloy, although there are also a large number of gold elongated lunates (Subtype 1I.b) from this region. In the dataset as a whole, light earrings (typically less than 3 g) predominate, although the majority of these derive from Cyprus, due mostly to the very large number of artefacts recovered from Enkomi. Earrings are notable for their rarity in the Aegean.
- Rings (Category 2) in the southern Levant tend to be small plain rings that weigh less than 5 g; these rings constitute a significant proportion of overall finds there. In the Aegean and Cyprus, rings appear within all weight categories. Rings are mainly made of copper alloy, although large bezel rings of gold were popular in both the Aegean and Cyprus. Even in the Early Iron Age when the use of gold in these regions diminishes, there remains a preference for solid heavy rings. Plain rings of silver are particularly popular at Perati, no doubt due to the proximity of the site to the Laurion silver mines.
- Bangles (Category 3) make up a considerable proportion of the dataset, mainly in copper alloy and averaging 21 g in weight. A large number of these come from Far'ah and Sahab. These bangles appear to be closely aligned with southern Levantine traditions, where those

made of copper alloy are the most popular category of object in Cisjordan, Transjordan, and Philistia (Subtypes 3II.b and 3III.b). The median diameter of 57 mm indicates that the majority of bangles functioned as bracelets rather than anklets (diameters greater than 80 mm being more likely for an adult anklet).[13] The weight of bangles is higher in Cisjordan, especially at Nasbeh, where they weigh between 50.1–75.0 g, and the majority are greater than 80 mm in diameter, perhaps as they functioned as both anklets and as weights.[14] Although the greatest numbers of units in fact come from Sahab and Far'ah, the smaller diameter of these bangles indicates that the majority are bracelets, and that these sites employed adornment traditions that differed from those at Nasbeh. Iron bangles are typically identified as bracelets rather than anklets, possibly as iron was a precious material displayed on the most visible areas of the body. Only few bangles are amongst the large corpus of jewellery from Enkomi and they rarely appear in the Aegean. This may in part reflect a tendency to use strung beads to create bracelets or anklets in these regions.

- Pendants (Category 4) constitute one of the smallest categories in the database after hair spirals and mouthpieces (which are in fact both types within the broader categories of rings and foil ornaments).
- Beads (Category 5) constitute the largest category. The large proportion of beads in the database mostly reflects the fact that necklaces deposited in tombs usually survive as large collections of individual beads. In general, there are many fewer metal beads and pendants in the southern Levant than in the Aegean and Cyprus, where they dominate. The most common pendant in the Levant is the crescent pendant (Subtype 4IV.a), which has a minor influence across the eastern Mediterranean. Beads and pendants are most frequently made of gold, although crescent pendants occur in a variety of materials. The Late Bronze Age Aegean tradition of gold relief beads was carried eastward to Cyprus, but it did not manage to influence practices in the southern Levant, where beads are most often simple and made of gold sheet-metal.
- Clothing fasteners (Category 6) that were preferred in the different geographic regions demonstrate the greatest difference in regional adornment practices. Long dress pins dominate in the Aegean but have only a minor influence on Cypriote fashions. These fasteners are usually made of copper alloy, although there is an increase in the number of iron pins after 1200 BCE. By contrast, shorter toggle pins of copper alloy (Subtypes 6I.a.ii and 6I.b.vi) dominate in the southern Levant; these pins also had an influence on Cypriote fashions. The third group of fasteners, fibulae, are mainly plain arched bow forms made of copper alloy (Subtype 6III.b.ii). Fibulae were popular in the Aegean slightly before 1200 BCE, after which they are believed to establish a presence in Cyprus and (to a lesser extent) in the southern Levant;[15] however, the appearance of fibulae first in Cyprus is not evident in the dataset (1 unit), with more examples in fact coming from the southern Levant (20 units). In the Aegean, fibulae are believed to be the second most common

[13] Refer to Section 4.5.
[14] Brody and Friedman 2007, pp. 103–104.
[15] Refer to Giesen 2001.

artefact category after pins (at least at sites such as Lefkandi),[16] but in fact, beads are the most common artefact (347 units), followed by plaques (182 units), rings (113 units), and only then fibulae (88 units), which are more common than pins (38 units).

- Foil ornaments (Category 7) have a strong history in the funerary traditions of Cyprus, and to a lesser degree, in the Aegean. Diadems, mouthpieces, and plaques (mainly Subtype 7III.a.ii rosettes) are in most cases made of gold. This category has only a minor presence in the Levant, particularly after 1200 BCE. Although foil ornaments are common in the Late Bronze Age in both the Aegean and Cyprus, they decline in use during the Early Iron Age contemporaneously with the reduction in other luxury goods across the region. The data for this category, it should be said, is more complete than for any other category.
- In the Aegean, the abundance of ornate gold jewellery dated to the Minoan and Mycenaean periods gives way to more subdued copper alloy and iron forms dated to the Submycenaean and Protogeometric periods. Despite changes in practice, these objects still manage to retain a sense of weightiness, mainly in the form of substantial clothing attachments such as robust dress pins and fibulae; this preference for heavy and solid forms is most clearly reflected amongst the finds from the Kerameikos cemetery.[17]
- Cypriote jewellery includes subtypes also found in both the southern Levant and the Aegean. This rather interregional character of jewellery in Cyprus (a character particularly evident in the jewellery from Enkomi) no doubt has to do with the island's location between the Aegean and the southern Levant, and its role as a gateway between the two regions.[18] Cyprus was thus influenced by both the Aegean and the southern Levant, yet it also maintained its own distinctive adornment practices in the face of continual contact with these neighbouring cultures.
- Cypriote styles of adornment are less restrained than in other regions. The large number of gold objects from Late Cypriote mortuary contexts no doubt expresses the elite identity of their owners and suggests the value placed on adornment in Cyprus at this time. The small numbers of copper alloy and iron items of jewellery from Cyprus may on one hand reflect this preference for precious metals in elite burials and a decline of valuables in other mortuary contexts,[19] and may on the other hand reflect the methods of excavation in the 19th and early 20th centuries, in which objects of less valuable materials were often simply discarded.[20] The unavailability of jewellery dated to the latter part of the Late Cypriote III means that the transition from the Late Bronze Age to the Early Iron Age is not as well understood for Cyprus as for the Aegean and the southern Levant. Despite the paucity of fibulae in the database, the increased prevalence of fibulae in Early Iron Age Cyprus was a significant change to adornment practices there.[21]

[16] Catling 1985, pp. 19–20.
[17] Kraiker and Kübler 1939; Kübler 1943; Müller-Karpe 1962; Ruppenstein 2007; Styrenius 1967.
[18] Hirth 1978, pp. 35–45. For a discussion, see Voskos and Knapp 2008, p. 151.
[19] Keswani 2004, p. 85, 119–120. Cf. the wealth in Tomb 11 Kalavasos *Ayios-Dhimitrios* (Goring 1996) and Tomb 18 Enkomi (Keswani 2004, p. 126).
[20] Goring 1983b, pp. 28–46.
[21] Giesen 2001.

- Overall, little distinguishes the adornment trends of Philistia, Cis-, and Transjordan, where there is a conservative tendency to stick with local forms, and little sign of diversity. Early Iron Age jewellery assemblages from the southern Levant fail to reach the heights of technical expertise and luxury found in Late Bronze Age contexts such as at 'Ajjul,[22] though the gold hoard from Tawilan is a notable exception.[23] Despite several silver hoards dated to the Early Iron Age,[24] the majority of metal jewellery in Philistia, Cis-, and Transjordan is made of copper alloy and demonstrates a limited repertoire of decorative techniques. Levantine jewellery is increasingly made of iron in the Iron Age, although the number of examples in the archaeological record remains small; the limited amount of iron jewellery may have to do with the rapidity with which iron degrades.
- In the southern Levant, the frequency of bangles is highest, followed by earrings and rings. This pattern differs from the Aegean where other than beads (which although the largest category would have been strung together as larger items such as necklaces or bangles), the preference is for rings, followed by plaques, fibulae, and pins. In Cyprus, once again other than beads, the preference is for earrings, while the differences in the frequency of other categories are less pronounced. Overall, most categories have a greater presence in Phase 1 (Iron Age I) other than foil ornaments (see **Table D.21**).
- The development and introduction of a few new jewellery forms into the southern Levant during the Late Bronze Age/Early Iron Age transition was the result of a multi-regional sphere of influence. These new forms include: (1) subtypes with granule and wire decoration such as spectacle-spiral pendants that were inspired by examples from the Near East; (2) subtypes such as double stranded rings and decoratively incised bangles, which come from sites with *Sea Peoples*' associations and have links to central European traditions; and (3) the development of the flowerbud earring into a tassel earring in the corpus of Levantine jewellery; this phenomenon is unknown elsewhere, but is contemporaneous with the appearance of *Sea Peoples* in the region.

Overall, the results indicate that while some subtypes are found across the eastern Mediterranean, the majority of subtypes found in the southern Levant are unique to the region. These objects were not adopted from the southern Levant's Aegean neighbours, but were partially influenced by Cyprus.

5.5 ANALYSIS OF SIMILARITY BETWEEN REGIONS

I now proceed to use statistical analysis to generate matrices that illustrate the degree of similarity between the jewellery from the five regions (the Aegean, Cyprus, Cisjordan, Philistia, and Transjordan). These matrices are generated from the tables in Appendix E, where the precise procedure used to generate the matrices is also given.

[22] E.g., Barnett 1951 and Negbi 1970.
[23] Maxwell-Hyslop 1984; Ogden 1995.
[24] E.g., three hoards from Beth Shean: Thompson 2009.

5.5.1 Phase 1: Similarity between Regions Based on Jewellery Types

In all, the typology contains 37 types — seven for earrings, five for rings, and so on. In this phase, five matrices are generated, each illustrating the similarity between regions based on these 37 types, as measured along five different parameters. This similarity is given a score scaled from 1 to 10 (1 = Most similar; 10 = Least similar).

Matrix 1 (generated through parts 1.A + 1.F of the procedure in Appendix E) illustrates the degree of similarity between each region based simply on the *presence or absence* of each of the 37 types in each region:

Presence/Absence of types					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		2.29	2.29	7.55	10.00
Cyprus			1.00	4.09	5.18
Cisjordan				3.25	4.09
Philistia					7.55
Transjordan					

Fig. 26. Matrix 1: Similarity between regions based on the presence or absence of each of the 37 types (1 = most similar, 10 = least similar)

This first matrix shows that in terms of the *presence or absence* of each of the 37 types in each region, Cyprus and Cisjordan are most similar, while Transjordan and the Aegean are most dissimilar. Philistia is more similar to Cisjordan and Cyprus than to Transjordan or the Aegean.

Matrix 2 (generated through parts 1.B + 1.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *number of observations*[25] of each of the 37 types in each region:

Observations of types					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		6.32	2.39	4.83	5.45
Cyprus			4.21	6.19	7.61
Cisjordan				1.59	1.00
Philistia					10.00
Transjordan					

Fig. 27. Matrix 2: Similarity between regions based on the number of observations of each of the 37 types (1 = most similar, 10 = least similar)

[25] The database contains 2302 entries, each of which I call an 'observation': each observation contains one or more items of the same subtype of jewellery found in the same context. For example, entry (observation) no. 429 in the database consists of 17 beads of the same subtype found in the same context; thus though there are 17 beads, this constitutes only one 'observation.'

This second matrix shows that, in terms of the *number of observations* of each of the 37 types in each region, Cisjordan and Transjordan are most similar, while Philistia and Transjordan are most dissimilar. Philistia is again more similar to Cisjordan, as in Matrix 1, but is now more similar to the Aegean than to Cyprus or Transjordan.

Matrix 3 (generated through parts 1.D + 1.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *number of units*[26] of each of the 37 types in each region:

Units of types					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		5.08	2.50	4.79	5.61
Cyprus			3.27	5.47	6.22
Cisjordan				1.78	1.00
Philistia					10.00
Transjordan					

Fig. 28. Matrix 3: Similarity between regions based on the number of units of each of the 37 types (1 = most similar, 10 = least similar)

This third matrix shows results that are analogous to the first two matrices: in terms of the *number of units* of each of the 37 types in each region, Cisjordan and Transjordan are most similar, as in the second matrix — while Philistia and Transjordan are most dissimilar, as in the second matrix. As in both the first and second matrices, Philistia is again more similar to Cisjordan and Cyprus, but as is the second matrix is more similar to the Aegean than to Cyprus or Transjordan.

Matrix 4 (generated through parts 1.C + 1.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *distribution of 'observations' among the types in each 'assemblage'*:[27]

Observations of type assemblages					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		2.54	3.11	7.14	6.54
Cyprus			1.00	2.80	3.14
Cisjordan				2.36	2.02
Philistia					10.00
Transjordan					

Fig. 29. Matrix 4: Similarity between regions based on the distribution of observations among types in each assemblage (1 = most similar, 10 = least similar)

[26] A 'unit' is an individual item of jewellery; thus entry (observation) no. 429 in the database, which consists of 17 beads of the same subtype found in the same context, comprises one 'observation,' but 17 'units.' In all, the database contains 3900 'units' (individual items of jewellery).

[27] For the definition of 'observation,' see footnote 25. An 'assemblage' is here defined as 'all observations of all types of one category of jewellery in one region' — for example: 'All observations of earrings (Types 1I–1VII) in the Aegean.'

This fourth matrix shows that, in terms of the *distribution of 'observations' among the types in each 'assemblage,'* Cyprus and Cisjordan are most similar, as in the first matrix — while Philistia and Transjordan are now most dissimilar, as in the second and third matrices. As in the first matrix, Philistia is again more similar to Cisjordan and Cyprus, and as in the second and third matrices, is next most similar to Cyprus than to the Aegean or Transjordan.

Matrix 5 (generated through parts 1.E + 1.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *distribution of 'units' among the types in each 'assemblage'*:[28]

Units of type assemblages					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		2.77	3.26	7.46	6.65
Cyprus			1.00	2.59	3.15
Cisjordan				2.10	1.62
Philistia					10.00
Transjordan					

Fig. 30. Matrix 5: Similarity between regions based on the distribution of units among types in each assemblage (1 = most similar, 10 = least similar)

This fifth matrix shows that, in terms of the *distribution of 'units' among the types in each 'assemblage,'* Cisjordan and Cyprus are again most similar, as in the first and fourth matrices — while Philistia and Transjordan are most dissimilar, as in the second to fourth matrices. As in the all four of the preceding matrices, Philistia is again more similar to Cisjordan and Cyprus than to Transjordan or the Aegean.

The fact that the five matrices above are quite similar to each other, despite the fact that they were generated by analysing the data along five different parameters, suggests that the overall results are meaningful. In all five matrices, Philistia is most similar to Cisjordan. Meanwhile, the closest similarity is in fact between Cyprus and Cisjordan in Matrices 1 (**Fig. 26**), 4 (**Fig. 29**), and 5 (**Fig. 30**), and between Cisjordan and Transjordan in the other two matrices (**Figs. 27–28**). The Aegean is most dissimilar to Transjordan in Matrix 1 (**Fig. 26**), while Philistia is most dissimilar to Transjordan in the remaining four matrices (**Figs. 27–30**). The Aegean is equally similar to Cisjordan and Cyprus in Matrix 1 (**Fig. 26**), but most similar to Cisjordan in Matrices 2 and 3 (**Figs. 27–28**), and most similar to Cyprus in Matrices 4 and 5 (**Figs. 29–30**).

Matrix 6 below shows the average of Matrices 1–5, representing an overall result for Phase 1:

[28] For the definition of 'unit,' see footnote 26, and for the definition of 'assemblage,' see footnote 27.

Average of Matrices 1–5					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		3.80	2.71	6.36	6.85
Cyprus			2.09	4.23	5.06
Cisjordan				2.22	1.95
Philistia					9.51
Transjordan					

Fig. 31. Matrix 6: Average scores for Phase 1 of similarity between regions (1 = Most similar in all five matrices; 10 = Least similar in all five matrices)

This sixth matrix shows that overall, Cisjordan and Transjordan are most similar in Phase 1, closely followed by Cyprus and Cisjordan and then Cisjordan and Philistia. By comparison, Philistia and Transjordan are most dissimilar, followed by the Aegean and Transjordan, and then the Aegean and Philistia. The values in Matrix 6 are illustrated in the figure below:

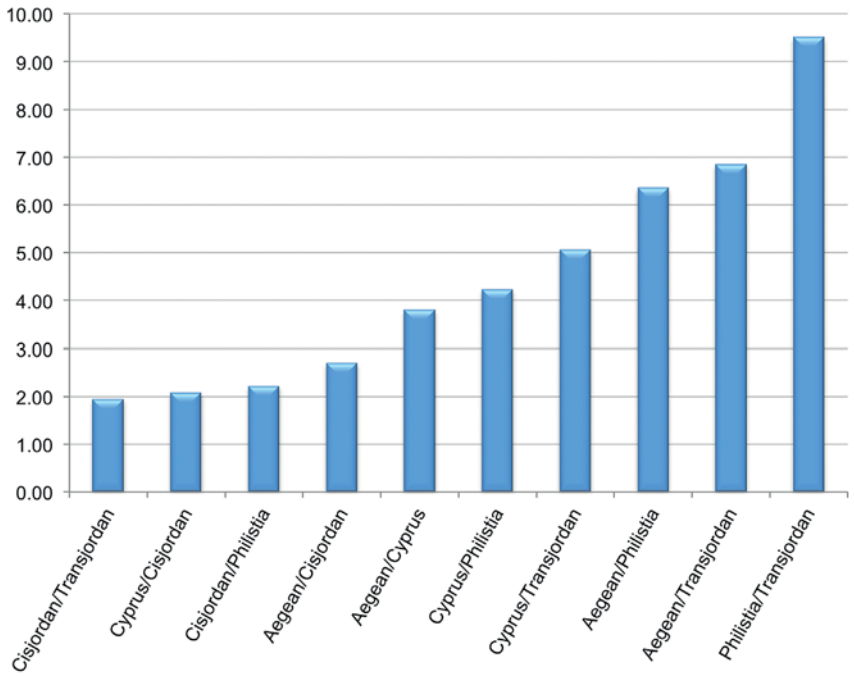

Fig. 32. Values in Matrix 6 (from most to least similar), showing overall similarity of pairs of regions in Phase 1 (1 = Consistently most similar; 10 = Consistently least similar)

Despite these Phase 1 analyses producing reasonably consistent results, however, basing the analyses on whole types rather than on subtypes may be producing results that are too broad to demonstrate nuanced differences between regions. Phase 2 addresses this issue.

5.5.2 Phase 2: Similarity between Regions Based on Jewellery Subgroups

In this phase, I generate five additional matrices (Matrices 7–11) that illustrate the similarity between regions based on 44 hand-picked 'subgroups' (that is, subtypes or groups of subtypes in the typology). Each 'subgroup' consists either of a single distinctive subtype, or of a group of stylistically-similar subtypes.[29] Table E.19 lists and describes all the 'subgroups' — there are six for earrings, 10 for rings, and so on. The five matrices presented below illustrate the similarity between regions based on these 44 subgroups, as measured along the same five parameters as in Phase 1.

Matrix 7 (generated through parts 2.A + 2.F of the procedure in Appendix E) illustrates the degree of similarity between each region based simply on the *presence or absence* of each of the 44 subgroups in each region:

Presence/Absence of subgroups					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		2.97	1.48	7.22	7.22
Cyprus			1.00	6.25	5.45
Cisjordan				3.75	1.88
Philistia					10.00
Transjordan					

Fig. 33. Matrix 7: Similarity between regions based on the presence or absence of each of the 44 subgroups (1 = most similar, 10 = least similar)

This seventh matrix shows that, in terms of the *number of observations* of each of the 44 subgroups in each region, Cisjordan and Cyprus are most similar, while Transjordan and the Aegean are most dissimilar. Philistia is more similar to Cisjordan and Cyprus than to the Aegean or Transjordan.

Matrix 8 (generated through parts 2.B + 2.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *number of observations*[30] of each of the 44 subgroups in each region:

[29] E.g.: Earring Subgroup 1 is comprised of only the most frequently occurring lunate earring (Subtype 1I.b); Ring Subgroup 3 is comprised of closed rings with a lentoid section (Subtype 2I.a.iv) and similarly-shaped closed rings with a plano-convex section (Subtype 2I.a.v); Bangle Subgroup 6 is comprised of open-ended bangles with a lozenge section (Subtype 3II.j) and overlapping bangles that also have a lozenge section (Subtype 3III.g); Bead Subgroup 3 is comprised of short hollow barrel beads (Subtype 5III.a) and similarly-shaped long hollow barrel beads (Subtype 5III.b); Pin Subgroup 2 is comprised of all the variations of the ribbed toggle pin (Subtypes 6I.b.i through 6I.b.iv); and Fibula Subgroup 1 is comprised of all the variations of the semi-circular bow fibulae (Subtypes 7III.a.i through 7III.a.viii).

[30] For the definition of 'observation,' see footnote 25.

Observations of subgroups					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		8.98	2.51	10.00	6.52
Cyprus			2.60	9.33	6.48
Cisjordan				1.84	1.00
Philistia					9.85
Transjordan					

Fig. 34. Matrix 8: Similarity between regions based on the number of observations of each of the 44 subgroups (1 = most similar, 10 = least similar)

This eighth matrix shows that, in terms of the *number of observations* of each of the 44 subgroups in each region, Cisjordan and Transjordan are most similar, while Philistia and the Aegean are now most dissimilar. Philistia is again more similar to Cisjordan and Cyprus than to the Aegean or Transjordan, as in the first matrix.

Matrix 9 (generated through parts 2.D + 2.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *number of units*[31] of each of the 44 subgroups in each region:

Units of subgroups					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		6.93	2.27	10.00	5.65
Cyprus			2.80	9.27	5.12
Cisjordan				1.92	1.00
Philistia					9.49
Transjordan					

Fig. 35. Matrix 9: Similarity between regions based on the number of units of each of the 44 subgroups (1 = most similar, 10 = least similar)

This matrix shows similar results to Matrix 8: in terms of the *number of units* of each of the 44 subgroups in each region, Cisjordan and Transjordan are again most similar — while the Aegean and Philistia are most dissimilar. As in both Matrices 7 and 8, Philistia is again most similar to Cisjordan — while beyond that, Philistia is more similar to Cyprus than to Transjordan or the Aegean.

Matrix 10 (generated through parts 2.C + 2.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *distribution of 'observations' among the types in each 'assemblage'*:[32]

[31] For the definition of 'unit,' see again footnote 26.
[32] For the definition of 'assemblage,' see footnote 27.

Observations of subgroup assemblages					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		6.40	1.13	9.09	4.62
Cyprus			1.21	8.90	4.69
Cisjordan				1.22	1.00
Philistia					10.00
Transjordan					

Fig. 36. Matrix 10: Similarity between regions based on the distribution of observations among subgroups in each assemblage (1 = most similar, 10 = least similar)

This matrix shows that, in terms of the *distribution of 'observations' among the types in each 'assemblage,'* Cisjordan and Transjordan are (marginally) more similar than Cisjordan and Cyprus, as in Matrices 8 and 9, and (by a similar small margin) more similar than Cisjordan and Philistia — while the Aegean and Philistia are again most dissimilar, as in Matrices 8 and 9. As in Matrices 8 and 9, Philistia is once again most similar to Cisjordan — while it is (marginally) more similar to Cyprus than to the Aegean.

Matrix 11 (generated through parts 2.E + 2.F of the procedure in Appendix E) illustrates the degree of similarity between each region based on the *distribution of 'units' among the subgroups in each 'assemblage'*:

Units of subgroup assemblages					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		5.94	1.00	10.00	4.64
Cyprus			1.48	8.17	4.50
Cisjordan				1.24	1.05
Philistia					9.39
Transjordan					

Fig. 37. Matrix 11: Similarity between regions based on the distribution of units among subgroups in each assemblage (1 = most similar, 10 = least similar)

This matrix shows that, in terms of the *distribution of 'units' among the subgroups in each 'assemblage,'* Cisjordan and Transjordan are again most similar, as in Matrices 8 through 10 — while the Aegean and Philistia are most dissimilar, as in Matrices 8 and 9. As in all four of the preceding matrices, Philistia is again most similar to Cisjordan, and more similar to Cyprus than to Transjordan or the Aegean.

Overall, the five matrices for Phase 2 (**Figs. 33–37**) indicate that Aegean material is most dissimilar to Philistia in Matrices 8, 9, and 11 (**Figs. 34, 35,** and **37**), and most dissimilar to Transjordan in Matrices 7 and 10 (**Figs. 33** and **36**). The closest similarity is between Cisjordan and Transjordan in all but the absence/presence of subgroups (see **Fig. 33**), where the closest similarity is between Cyprus and Cisjordan. The Aegean is most similar to Cisjordan in all five matrices; this result is similar to the results of Phase 1, where the Aegean is equally similar to Cisjordan and Cyprus in Matrix 1 (**Fig. 26**), most similar to Cisjordan in Matrices 2 and 3 (**Figs. 27–28**), and most similar to Cyprus in Matrices 4 and 5 (**Figs. 29–30**).

Matrix 12 shows the average of Matrices 7–11, representing an overall result for Phase 2:

Average of Matrices 7–11					
	Aegean	**Cyprus**	**Cisjordan**	**Philistia**	**Transjordan**
Aegean		6.25	1.68	9.26	5.73
Cyprus			1.82	8.39	5.25
Cisjordan				1.99	1.19
Philistia					9.75
Transjordan					

Fig. 38. Matrix 12: Average scores for Phase 2 of similarity between regions (1 = Most similar in all five tables; 10 = Least similar in all five tables)

This matrix clearly demonstrates that overall, Cisjordan and Transjordan are most similar in Phase 2, closely followed by the Aegean and Cyprus, and then Cisjordan and Cyprus. By comparison, Philistia and Transjordan are most dissimilar in Phase 2, closely followed by Philistia and the Aegean. The results for Phase 2 are consistent with those for Phase 1, in that:

1. Cisjordan and Transjordan are the most similar pair of regions in both phases, while Cyprus/Cisjordan and the Aegean/Cisjordan are the two next-most similar pairs of regions in Phase 2, and among the three most similar pairs of regions in Phase 1; and
2. Philistia/Transjordan and the Aegean/Philistia are the two most dissimilar pairs of regions in Phase 2, and among the three most dissimilar pairs of regions in Phase 1.

The values in Matrix 12 are illustrated in the figure below:

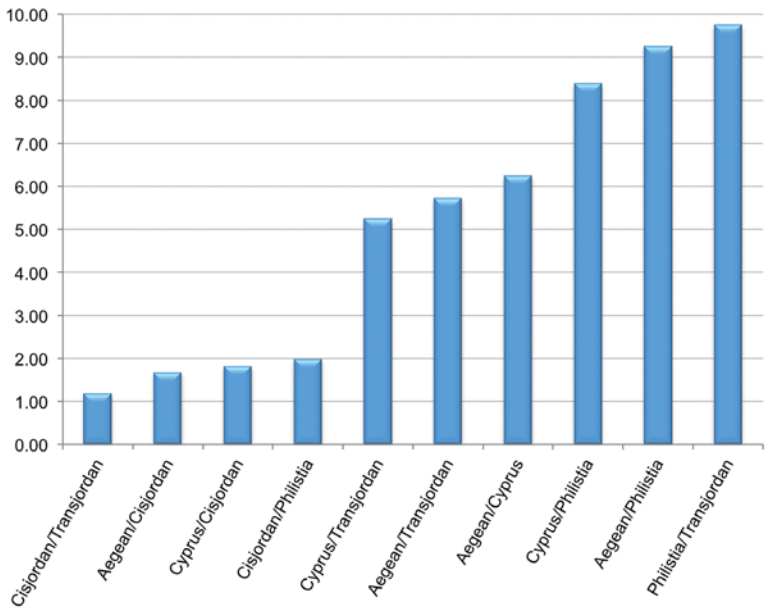

Fig. 39. Values in Matrix 12 (from most to least similar), showing overall similarity of pairs of regions in Phase 2 (1 = Consistently most similar; 10 = Consistently least similar)

While the analyses in Phases 1 and 2 highlight the relative degrees of similarity between the jewellery in each of the five regions, they do not explain those similarities. In all Phase 2 matrices, the similarity between Cisjordan and Transjordan can be explained by their geographic proximity and the social and cultural interactions that are known to have taken place between the two regions. The fact that Cyprus is most similar to Cisjordan in all Phase 2 matrices can likewise be explained by their geographic proximity and the exchanges that would have taken place between these regions. More unexpected, perhaps, is the relatively high degree of dissimilarity between Cyprus and the Aegean in most matrices from Phase 2, though this no doubt reflects some of Cyprus' unique adornment traditions. The fact that Philistia is most similar to Cisjordan (and next-most similar to Cyprus) in most matrices from both phases again probably reflects the geographic proximity of these regions. Philistia is most dissimilar to Transjordan, and then the Aegean in all Phase 1 matrices (except for Matrix 1 when they are equally dissimilar), and in Phase 2 is either most dissimilar to Transjordan, and then the Aegean (Matrices 7, 10, and 12), or most dissimilar to the Aegean, and then Transjordan (Matrices 8, 9, and 11). This result is especially intriguing given traditional notions about an Aegean origin for the Philistines, and given the close similarity shared by Philistia and Transjordan with Cisjordan but not with each other.

As a final note, then, I return the reader's attention to Appendix D, and to the three most prevalent categories in the southern Levant — earrings, rings, and bangles. The data in Tables D.14–D.16 shows that Philistia did indeed share all the most common subtypes with Cisjordan, while two less common bangle subtypes (Subtypes 3II.h and 3IV.a), one pendant subtype (Subtype 4III.b), and one mouthpiece subtype (Subtype 7II.a) are shared by Philistia and Cyprus. In contrast, only one occurrence of an uncommon subtype (ring/hairspiral Subtype 2IV.b) is shared only by Philistia and the Aegean in the database, although this subtype is also known to occur in Cyprus, and in fact originates in central Europe.[33] The implications are that (1) Philistia and Cisjordan did indeed share many of the same adornment practices, right from the start of the Iron Age, and (2) there appears to have been an intentional rejection of Aegean and Transjordanian styles of metal jewellery in Philistia, perhaps as a strategy for maintaining cultural boundaries.

[33] Refer to section 3.4.4.2.

CHAPTER 6

INTERPRETATIONS AND CONCLUSIONS

Adornment customs during the Late Bronze Age/Early Iron Age transition in the southern Levant demonstrate the inclusion of only few non-local customs. Rather, it appears that from the Iron Age I–II there are rare appearances of foreign features and the re-contextualisation of some customs by expressing Canaanite tradition through the lens of new regional social groups. At a personal or community level, the introduction of foreign features may have been expressions of group solidarity through the continuity of older traditions that were synonymous with a sense of place. By contrast, given that the transformation of other forms at a regional level occurred from the Iron Age I following a period of flux in the southern Levant, these changes might be perceived as a reaction to new local needs for expressing identity.

Having measured diversity in the previous chapter, I now consider the processes governing the introduction and development of different jewellery subtypes by means of two approaches. Initially, I assess the jewellery assemblage of a single Philistine site — Gath — in order to interpret regional variability on a micro-regional scale using a theoretical model that adopts aspects of entanglement and embodiment theories. Secondly, I assess a selection of objects that perhaps symbolised communal and personal meanings in order to offer evidence of relational and material entanglement in the broader region, and the introduction of anomalies as evidence for individual agency. In a final summary, I highlight the importance of discussing culturally determined practices alongside notions of individual agency so that we might better interpret the *nature of* and *changes to* material culture.

6.1 CASE STUDY: TOMB 1, TELL ES-SAFI/GATH

I now discuss a Philistine funerary context and the manner in which non-local traditions might have been integrated or modified in an area of diverse cultural contacts. Tomb 1 at Gath, a city with a distinct role in the Philistine pentapolis, is taken as a case study to identify patterns related to the dynamics of cultural and social identity formation in Philistia. I present this discussion under three subheadings: (1) *Site*, (2) *Jewellery*, and (3) *Summary*.

6.1.1 The Archaeological Site

Tomb 1 in Area T at Gath — a man-made cave in the Shephelah region of Israel[1] — contained the skeletal remains of over 70 individuals (adults and children) and a large and varied assemblage of jewellery (**Fig. 40**). The following analysis focuses on all items of personal adornment (metal, stone, glass, faience, paste, and shell) found within the burial cave, although

[1] Faerman *et al.* 2011.

only the metal objects are included in the dataset. The finds presented here contribute to the limited data available regarding Philistine burial traditions.[2]

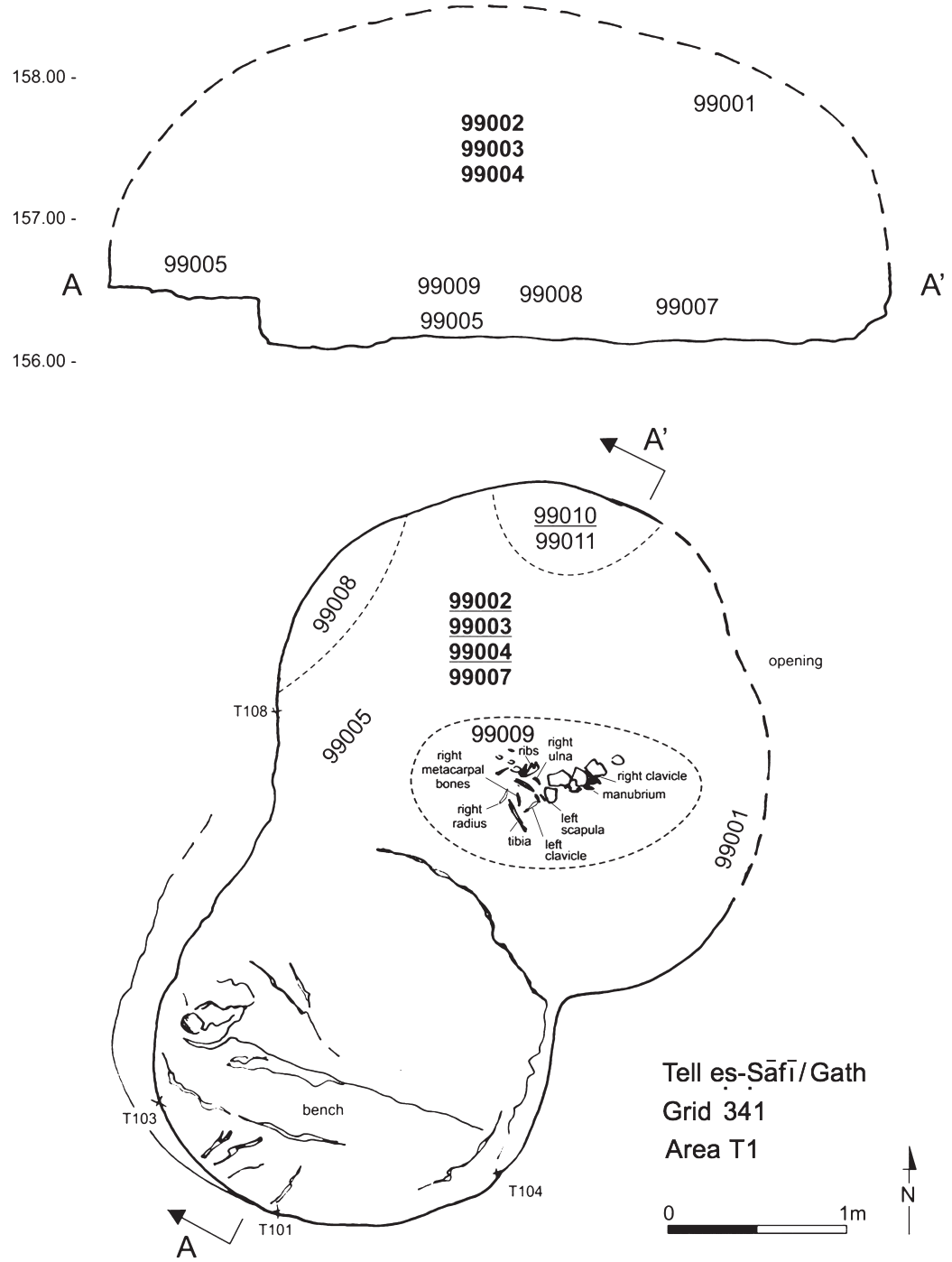

Fig. 40. Plan of Tomb 1 showing disturbed primary burial in Locus 99009 (after Faerman *et al.* 2011)

[2] E.g., Ashkelon: Stager *et al.* 2008a, p. 266: fig. 15:35; Ashdod: Haas 1971; Azor: Ben-Shlomo 2008; ʻEitun: Edelstein *et al.* 1971; Edelstein and Aurant 1991; and Edelstein and Schreiber 2000; and Gath: Faerman *et al.* 2011. The publication of recently discovered burials at Ashkelon has greatly enhanced our understanding of Philistine mortuary traditions, although detailed information of the adornment practices at that site remains eagerly awaited: Masters and Aja 2017.

Artefacts from the uppermost layers of the cave (Loci 99001, 99002, 99003) were heavily disturbed by modern looters. Below these mixed levels was locus 99004, which contained a large assortment of jewellery, but which also displayed evidence of modern disturbance. Below locus 99004 modern intrusions decreased, particularly in the northern half of the cave, possibly as the result of a collapsed roof slab that had obstructed looting.[3] Locus 99007 yielded a large quantity of jewellery and like locus 99004, contained pottery primarily dated to the Iron Age I–II. This chapter discusses the jewellery recovered from loci 99001–990010 shown above.

6.1.2 The Excavated Jewellery

Among the finds in Tomb 1 is a rich assemblage of 219 adornment objects. These objects are made of stone, vitreous material, metal, and shell. The jewellery is presented according to the subheadings: (1) *Metal Jewellery* (bangles, rings, earrings, and fibulae), (2) *Pendants*, (3) *Beads*, and (4) *Marine Shells*. A complete catalogue of artefacts from Tomb 1 that includes each object's details and findspot is available in Catalogue C (online).

6.1.2.1 Metal Jewellery

The metal jewellery from Tomb 1 incorporates a total of 77 whole specimens and fragments. These items include a range of earrings, rings, bangles,[4] and fibulae made of copper alloy and iron.

Two earrings in the dataset, nos. 27 and 76, are of the elongated lunate form (Subtype 1I.b). This earring type is the most common earring in the southern Levant, and is frequently made of silver, gold, or copper (**Fig. 41:I.b**).

Flat band rings, as well as those of round section, occur in annular form or with overlapping terminals. Those with a flat section (nos. 38 and 82) are paralleled at Iron Age I levels at Ekron in Philistia, as well as many other Iron Age I sites in the dataset (Subtypes 2I.b.iv and 2I.c.iv). Metal rings with a round or elliptical section are common from the Middle Bronze Age onwards (Subtypes 2I.b.i, 2I.b.ii, 2I.c.i, and 2I.c.ii). These types are generally found in copper alloy, but are less common in iron before the 10th century BCE. Ring no. 60 in the dataset is unique (Subtype 2I.a.iii), in that it has a small iron ring encircling the join of the band (**Fig. 43:I.a.iii**).

Bangles of round, ovoid, and plano-convex section are abundant, with sizes ranging from 45 mm–70 mm (see **Fig. 45**). As noted in Chapter 4, bangles with a diameter of <53 mm were most likely intended for children and infants.[5] Of the 69 whole and fragmentary bangles, it is possible to estimate the diameter of 35 units. The results reveal that 19 units (54 per cent) are suitable for children and infants. These bangles include subtypes with

[3] Faerman *et al.* 2011, p. 33.

[4] As no metal jewellery was found *in situ*, the term 'bangle' is used here to avoid confusion: refer to Section 4.5 on the identification of bracelets, anklets, and armlets.

[5] Ray 2009.

terminals that are tapered or blunt, and open-ended or overlapping. Skeletal analysis indicates that of the 77 individuals within the burial cave, 35 are subadults.[6] Thus, the inclusion of a large number of pieces with small diameters is most likely associated with the remains of infants and children within Tomb 1.

Bangle no. 31 with a round cross-section and blunt, somewhat broadened terminals is rare (Subtype 3II.h). This type is paralleled at the Early Iron Age cemetery of Azor (no. 10) and at Enkomi (nos. 1923–1924). The fragment of twisted wire (no. 65) is a form common from the Iron Age II period through to the Persian period but is less common in the Early Iron Age (Subtype 3IV.a). Parallels in the southern Levant that date from the 12th to ninth centuries BCE come from Taiyiba,[7] Akhziv,[8] and Lachish.[9]

Two plain fibulae bow fragments were found in Tomb 1 (nos. 48 and 52): one of the semi-circular variety (Subtypes 6III.a.i) and another fragment presumably of the same form, but whose condition made it difficult to determine the exact subtype (**Fig. 56: III.a.i**). Fibulae are also known from 12th–ninth centuries BCE Azor (no. 16), 12th century Megiddo (no. 794), 10th century or earlier Beit Mirsim,[10] 10th–eighth century Nasbeh (no. 947), 10th to ninth centuries Far'ah (no. 658), and seventh century BCE Ashkelon[11] (although the fibulae from the latter two sites include beaded mouldings). Fibulae were common in the Levant during the latter part of the Iron Age II, while examples dated to the earlier part of the Early Iron Age such as those from Gath are rare.

6.1.2.2 Pendants

Three pendants were located in Tomb 1. One of these is an unusual elongated drop pendant made of bone (basket[12] (B)990058), a second drop pendant is made of glass (B990076), while a third drop pendant is made of haematite (B990258a). B990058 can be classified as a miscellaneous drop (McGovern Type VI.F.3 or Beck Type XXII.B.2.b), while the latter two pendants loosely correspond to an elongated drop type (McGovern's VI.F.2). Such drop pendants appear in a variety of forms and had a wide distribution in antiquity.[13] Shells with perforations (making them suitable for suspension as pendants) are discussed below under the subheading *Shells*.

Pendant B990058 is in the form of a poppy cup or vase carved of bone; it is the only item of this material found in the tomb. The pendant has the appearance of a squat bulbous drop with a nail-head attachment at its lower end, somewhat similar to Egyptian vase beads.[14] This form should not be confused with pomegranate pendants (Subtype 4III.a), although it has much in common with the squat form of the lotus vessel pendant generally

[6] Faerman *et al.* 2011, p. 38.
[7] McCown 1947, pl. 112:5.
[8] Dayagi-Mendeles and Ben-Dor 2002, figs. 4.1:12 and 4.28:11.
[9] Tufnell 1953, pl. 54:75.
[10] Albright 1943, pl. 32:20.
[11] Park 2011, p. 433, fig. 15.4:49770.
[12] A basket is a unit used to differentiate the various finds found within a particular context.
[13] McGovern 1985, pp. 72–75.
[14] Beck 1973 [1928], p. 32, fig. 27:A.15.

made of carnelian (McGovern Type IV.F.5.b; Beck Type XXVI.B.3.d)[15] and the stone bulbous drop without the lower disc (McGovern's Type VI.F.1), which is also quite rare.[16] A similar object in opaque glass from Lachish has a suspension hole at the opposite end to the Gath example,[17] while comparable forms made of various materials occur in Late Bronze Age Minoan contexts.[18]

Pendant B990076 has a juglet-style handle (or suspension loop) formed by looping the upper elongated end of the drop over and fusing it to the body of the bead. This type is rare and is not seen again until the Byzantine period at Beit Mirsim.[19] Simple drop pendants (McGovern's Type VI.F.2), however, are a common feature in the southern Levantine pendant corpus[20] and the development of Egyptian jewellery has been traced to their use as single elements on necklaces.[21]

Pendant B990258a is made of haematite formed as a cylindrical shaft ending in a pyramidal head. At the pendant's suspension end, it has two perforations in the manner of a spacer bead. One of the holes appears to be only partially intact, suggesting the object has been broken, but microscopic analysis indicates that the end was polished in antiquity — a feature seen on objects from the Minoan period.[22] The manufacture of this pendant of haematite is unusual, and suggests the possibility of a foreign influence on Philistine material culture, as well as evidence of trade relations.[23] While haematite is often found in the form of seals or weights, this material is rarely used for non-angular beads or pendants in the southern Levant due to the hardness of the stone;[24] some exceptions include examples from Ashdod,[25] Bethel,[26] 'Eitun[27] and 'Araq en-Na'saneh.[28] Haematite beads also come from Minoan Palaikastro[29] and elsewhere on Crete.[30]

The pyramidal head of B990258a also shares similarities with Anatolian pinheads, for example at Troy II,[31] Alaca Höyük,[32] and at Boğazköy.[33] Interestingly, several other pins from Anatolia also exhibit a notched line (or broken perforation point) across the head of

[15] Beth Shean: Oren 1973, figs. 41.15 and 49.16; Beck 1973 [1928], p. 29, fig. 24:B.3.d.

[16] This is found at Ashdod: Golani and Ben-Shlomo 2005, fig. 4.1:6; Beth Shemesh: MacKenzie 1912–1913, pl. 30a:11; Tyre: Bikai 1978, pl. 56:25; and in Nasbeh: Badè Museum collection X724 and X282.

[17] Tufnell 1953, pl. 67.142.

[18] Effinger 1996, p. 51.

[19] Ben-Arieh 2004, pl. 3:2126–2128.

[20] McGovern 1985, p. 72.

[21] Aldred 1971, p. 144.

[22] Alexiou and Brice 1976, p. 19.

[23] Ben-Tor 1986, pp. 3–4. Deposits of haematite occur in the Faynan region: Levy *et al.* 2004, p. 78.

[24] E.g., Golani 2013, Type II.6.

[25] Golani and Ben-Shlomo 2005, figs. 4.1:6 and 4.2:1.

[26] Kelso 1968, p. 86.

[27] Edelstein and Aurant 1991, p. 30.

[28] Lapp and Lapp 1974, p. 105.

[29] Sackett *et al.* 1965, p. 303.

[30] Hood *et al.* 1958–1959, fig. 9.9.

[31] Blegen *et al.* 1950, pl. 125:4; see also pl. 358; and Troy III and V: Blegen *et al.* 1951, for example, pls. 39:4, 47:34–421, 34–248, 34–192, 33–207; 234:33–21, and 33–50.

[32] Kosay 1966, pls. 41:g136, g183 and 44:f139.

[33] Boehmer 1972, p. 83, pls. 17:288–290, 18:346–348, 19:384, 19:386, and 21:458–464.

pinheads in the same manner as that displayed on the base of the Gath example.[34] Bronze pendants from the Aegean and Anatolia with a perforation at the narrow end and a domed or biconical head also present similarities.[35] However, similarly-shaped gold pendants dated to the Bronze Age from Troy in Anatolia,[36] and picrolite pendants from Chalcolithic Erimi and Kissonerga-Mylouthkia in Cyprus[37] offer the closest parallels to the example from Gath. Like the haematite pendant from Gath, picrolite pendants often demonstrate use-wear, are broken, and have been reperforated.[38]

6.1.2.3 Beads

Beads represent over 33 per cent of the items of personal adornment from Tomb 1, with 74 units appearing in thirteen different subtypes. The bead collection displays a limited number of subtypes in a range of materials: faience, paste, Egyptian Blue, glass, stone, and one ceramic bead. Vitreous beads are particularly well-represented in the corpus: of the different subtypes, 56 units (75 per cent of the total beads) are made of faience. Next common in frequency are beads made of a brown-coloured paste of an indeterminate composition. All of these bead forms are paralleled in other Southern Levantine collections of a similar date.

The majority of faience beads have a core of granular composition. The original surface colour (glazed or self-glazing)[39] is difficult to identify as most beads have lost their colouring and are typically white or pale greenish-blue; this is most likely the result of surface leaching of the metallic oxides. Of the faience examples, 40 units are either circular barrel discs (Beck Type I.A.1.b) or circular cylinder discs (Beck Type I.A.2.b).

In addition, there are eight paste beads, with the majority being circular long barrels (Beck Type I.D.1.b). These beads are classified as 'paste' rather than 'faience,' as there is very little surface glaze remaining and their granular structure supports an identification of paste rather than weathered glass.[40] The glass beads are divided between light, friable, and those with a glassy structure to their surface. *Egyptian Blue* frit (which is coloured with a blue colourant rather than glazed, resulting in a matt and uniform colour) is found in only one example (B990255) — a circular long cylinder with two convex ends (Beck Type I.D.4.f.b).

[34] For those pendants from Boğazköy, see Boehmer 1972, pls. 20:419–420, 22:490, and 24:576–577. Examples with a notched line occur in a more exaggerated fashion at Troy (Blegen *et al.* 1953, pl. 301:37–388, 34–457, 36–769) and at Alaca Höyük (Kosay 1966, pls. 41:g182, 41:g242, 42:e33; and 45:g132). It also occurs at Alişar Hüyük where this pin is common in Stratum I — although examples appear until Stratum V: Schmidt 1932, fig. 69:b1056, b1333, b124, b136, b102, b897, b394, b924, b483, b355, b13, b1013; fig. 200:b1144 and b1179.

[35] For Anatolia, see Boehmer (1972, pl. 39:1184), and for a range of sites in the Aegean, see Type B:2 Pendant with eyelet, simple head and stem in Kilian-Dirlmeier (1979, p. 56). One bronze pendant from Gouras plot, Grave XXIII in east Lokris can be compared to similar pendants found in shrines, especially in Thessaly: refer to Kilian-Dirlmeier 1979, pp. 57–59, nos. 348–353, pl. 21; Dakoronia 2006, fig. 26:11.

[36] Treasure A, catalogue nos. 78–79, 82, 84, 88, 90, 92, 94, 96, and 99–100: Tolstikov and Treister 1996.

[37] Dikaios 1939; Peltenburg 2003. Thanks are owed to Amir Golani for bringing these objects to my attention.

[38] Peltenburg 1991, p. 114.

[39] Discussions of faience glazing techniques include those by Aspinall *et al.* 1972, p. 28; Moorey 1985, pp. 133, 159–162; and Nicholson and Peltenburg 2000.

[40] Lilyquist and Brill 1993.

Beads made of stone are restricted to three of carnelian and one of limestone.[41] Although cowrie shells are also considered beads, they are discussed below under the subheading *Marine shells*.

6.1.2.4 Marine shells

Of the marine shells, 65 units were most likely used as items of adornment. Most of these shells are *Monetaria annulus* (30), followed in frequency by *Glycemeris insubrica* (20), and *Cerastoderma glaucum* (5). The examples of *Monetaria annulus* all have the dorsum (back of the shell) removed; these shells represent 46 per cent of the total shell corpus and over 13 per cent of all items of personal adornment. The shells next most commonly represented are *Glycemeris insubrica* naturally holed at the umbo (30 per cent) — the protrusion at the top of the shell. Another eighteen shells are imperforated, meaning that their function is unknown.[42]

The genus *Cypraea* (commonly referred to as 'cowrie shells') is represented by 30 examples of *Monetaria annulus*. This species is extremely rare in the Gulf of Aqaba, and is more commonly found in the southern part of the Red Sea proper. Tomb 1 contained one example of the Mediterranean *Erosaria Spurca* (also of the genus Cypraea), which has perforations due to natural abrasion. Cowrie shells have a tradition of use dating back to prehistoric times, and are common from Middle Kingdom Egypt where they are found encircling the hips of female burials and figurines.[43] The shell's primary association is with women, children and some animals, and it is symbolically associated with the vulva. As an organism leaving a shell, it is associated with birth, rebirth, and the afterlife.[44] According to Petrie, this signifies its use as a protective amulet against the evil eye and witchery.[45] It is also linked to the human eye; for example, the Neolithic skulls from Jericho have inlaid cowries for eyes.[46] Cowries are included here as jewellery although they may also have functioned as a decorative embellishment on costumes. Such use of cowries is attested by the depiction of cowries adorning the edge of a garment worn by an Edomite male figurine from Horvat Qitmit.[47]

Imitations of the cowrie are made of precious metals, faience, stone, and glass, and painted examples in the British Museum come from sixth millennium BCE Arpachia.[48] Although the cowrie's symbolic significance may have shifted or evolved over the course of millennia, its value and traditional place in ornamentation is evident by its inclusion in an Iron Age II list of semi-precious items.[49] *Cypraea* are common in Iron Age levels in the southern Levant,

[41] Despite the evidence at Gath, pendants of stone are common from the prehistoric period: Petrie 1914, pp. 13, 28.

[42] Amongst the unexploited shells is one specimen of *Melanopsis buccinoidea*, which is a native freshwater species not known today in the area of Gath.

[43] Golani 2010.

[44] Reese 1991, p. 189.

[45] Petrie 1914, p. 27. See also Aldred 1971, pp. 15–16; Andrews 1990; 1994, p. 42; Golani 2010, pp. 328–330; 2013, pp. 71, 75, 78, 84, 176–177; Reese 1986, pp. 64–65; 1991, pp. 188–189.

[46] Kenyon 1952.

[47] Petrie 1914, p. 27; Beit-Arieh 1995, pp. 13–47; Mienis 1995.

[48] Golani 2010. Examples in gold come from Lahun and Dashur: Aldred 1971, pls. 19, 22, and 31.

[49] Golani 2010; Petrie 1914, p. 27.

and may have been used as a form of currency.[50] Nonetheless, the large number of *Monetaria annulus* specimens at Gath is unusual and is only paralleled only at Horvat Qitmit.[51]

Perforated bivalve specimens include 20 *Glycemeris insubrica*[52] (dog-cockle or bittersweet clam), three *Acanthocardia tuberculata*[53] and five *Cerastoderma glaucum* (bittersweet clam). These shells are abundant on the Mediterranean coast of Cisjordan. Such bivalves occur in Iron Age levels at Lachish,[54] where it is purported that the large number found there (despite a distance of *ca.* 30 kilometres from the coastline) might be due to their use in construction[55] — although their use in pottery burnishing and as pottery temper is also noted.[56]

The identification of *Conus* species can be problematic as these shells are found in the Mediterranean, but also occur in the northern part of the Red Sea. The two specimens from Gath have been identified as *Conus mediterraneus.* Both examples are perforated, although whether this is the result of intentional perforation or natural abrasion is unclear. Perforated *Conus* shells also come from Ekron,[57] Ashdod,[58] Hazor,[59] Beth Shean,[60] and Jawa.[61]

One complete *Nerita* shell with a hole opposite its aperture is a common Red Sea gastropod. This species also comes from Ashdod[62] and Megiddo.[63] The example from Gath has been specifically identified as a *Nerita orbignyana*. Two Mediterranean *Columbella rustica* are paralleled at Knossos.[64]

6.1.3 Summary

The jewellery assemblage of Tomb 1 is characterised by a relative lack of ornamentation. This simplicity in material culture may relate to the socio-economic conditions within Philistia at this early stage of the Iron Age, or at the least, to this group of individuals in Tomb 1 representing a lower social stratum.[65] The disclaimer should be offered, however, that current estimates of the wealth of the tomb might be skewed due to looting.

[50] Bar-Yosef Mayer 1999; 2000.

[51] I am indebted to Henk K. Mienis for his identification of the Tomb 1 molluscs and notes on their provenance.

[52] Shells previously identified as *Glycemeris violacescens* are now classified as *Glycymeris insubrica*: Bar-Yosef Mayer 2005.

[53] *Acanthocardia tuberculata* are also found at Ashdod: Golani and Ben-Shlomo 2005; Megiddo: Finkelstein *et al.* 2000, fig. 16.3:18–20; and Knossos: Panagiotaki 1999, p. 128.

[54] Bar-Yosef Mayer 2004, p. 2496.

[55] Bar-Yosef Mayer 1999.

[56] Bar-Yosef Mayer 2004, p. 2500.

[57] Reese 2006, p. 28; Golani 2013, p. 216.

[58] Dothan, M. and Porath 1982, pl. 17:15 right.

[59] Yadin *et al.* 1961, pl. 234:17–18.

[60] James and McGovern 1993, fig. 147:7.

[61] Daviau 2002, fig. 2.18:1–2.

[62] Golani and Ben-Shlomo 2005, p. 251, fig. 4.2:2.

[63] Finkelstein *et al.* 2000, fig. 16.3:1.

[64] Panagiotaki 1999, p. 175; Popham *et al.* 1984, p. 246. *Columbella rustica* also come from Epipalaeolithic Cyprus: Reese 1999, pp. 188–191; and Hayonim Terrace: Reese 1982.

[65] This assumption is corroborated by skeletal pathology, which demonstrates malnutrition and (in some instances) chronic disease: Faerman *et al.* 2011, pp. 43–44.

The majority of the metal jewellery from the burial cave is of typical Early Iron Age form, although the fibula bow fragments, the iron rings, and the twisted bangle fragment represent some of the earliest examples of their kind. Over half of the bangles for which sizes could be determined are suitable for children or infants, corresponding to the analysis of the skeletal remains. The high number of infants buried with items made of highly valued metals highlights the importance of personal status amongst the Philistines from a young age. Grave goods cannot be ascribed to any specific burials; therefore, other than noting the presence of artefacts suitable for children, it is not possible to make any further comment regarding age, gender, or social status.

Of the metal jewellery types, the fibulae are the only items that indicate a foreign influence.[66] If a migrating people had arrived in Philistia from the west, one might expect to find a large number of such artefacts at coastal sites in the Levant, but this is not the case. As noted earlier, evidence for fibulae in Early Iron Age Philistia is scarce, although they were more prevalent outside of Philistia during this same period.[67]

Of the pendants, the elongated haematite drop B990258a is of particular interest given its shared characteristics with Anatolian and Cypriote examples. The stylistic similarities between the Gath pendant and those from geographically and chronologically distant sites can be seen as evidence of long-range cultural influences into the Iron Age I–IIA, although how these influences arrived in Philistia is yet to be determined.[68]

The beads from Tomb 1 are similar to other Iron Age I–IIA assemblages, with a clear preference for vitreous materials over stone; this difference is due to stone requiring a greater amount of labour (and therefore a greater cost).

The worked shells from Gath include both Mediterranean and Red Sea species. The increase of Red Sea shell species within Early Iron Age levels in the southern Levant is possibly related to the development of trade networks at this time,[69] and the high number of *Monetaria annulus* specimens in particular merits further investigation as this suggests evidence for long-range trade between Gath and Arabia. If in fact these shells reached Gath during the Iron Age I–IIA (the main period of use of the tomb),[70] this ties in well with additional evidence at the site of long-range trade at the time — in the form of incense imported from the Indian subcontinent[71] and imported pottery from the Aegean.[72]

In summary, the assemblage from Tomb 1 at Gath is not characteristic of traditions seen outside of the Levant — instead, the finds are closely aligned with local traditions but with the occasional anomalous artefact. The fibulae fragments possibly demonstrate an Aegean influence, the pyramidal drop pendant possibly demonstrates an Anatolian or Cypriote influence, and the cowrie shells demonstrate an Arabian influence. This absence of

[66] Pedde 2000.

[67] E.g., Abu Hawam Strata III and IV: Hamilton 1934, pl. 33.119 and 33.192; Nasbeh: Stronach 1959, map 1; Megiddo: Loud 1948, pl. 223.77; Beit Mirsim: Albright 1932a, p. 34, pls. 32.20 and 63.39.

[68] Verduci 2014. Evidence of connections between Philistia and Anatolia is also manifested in language (regarding the so-called 'Goliath' inscription, see Maeir *et al.* 2008, p. 57) and other aspects of material culture: for references, see e.g., Maeir *et al.* 2008 and Davis *et al.* 2015.

[69] Reese 1986, p. 331. Cf. Prag 2001, p. 227.

[70] Faerman *et al.* 2011.

[71] Gadot *et al.* 2012 [submitted].

[72] Maeir *et al.* 2009.

clearly identifiable foreign material in Tomb 1 contrasts strongly with the notion that people of mixed heritage populated Philistia.

So, what can be inferred about the individuals themselves? As a starting point, we can presume that the process of burial was an active lived experience in which survivors inscribed the dead into social memory.[73] As Joyce suggests, the *beautification* of the corpse emphasises admiration of the deceased in an emotionally charged but formally structured setting,[74] while simultaneously displaying the personal practices of mourners and the deceased.[75] As noted earlier, infants and youths in the multiple tomb were accompanied by traditions of display similar to those afforded to adults. Conceivably, at the moment of burial, family members grappling with the death of young ones were starkly aware of their children's status within the group, which was grounded and embodied irrespective of age.[76] Due to the poor state of preservation of the skeletal material, which included individuals of mixed age and sex, little can be said about gender and rank display, nor can associations be drawn between jewellery and other grave goods. Nevertheless, the relative mediocrity of the adornments could lead one to suppose that indication of rank amongst the inhabitants of the tomb was relatively minimal. Perhaps less visible status-denoting factors were employed, such as an increased number of goods being buried with some individuals, or the specific placement of items on the body. Such small matters of difference might help tell the story of the individual actors within Tomb 1.[77] A biography of these individuals would inform us that the 77 men, women, and children experienced difficult lives, but nonetheless, at the site of the burial they would have stimulated a binding social memory for survivors, symbolically demarcating them as a kin-group with shared heritage and customs.

This interpretation of events is particularly significant when exploring the process of *cultural intentionalism* in relation to identity formation during the Early Iron Age. In this phenomenon, notions of difference were arguably concealed through the rejection of some classes of material that had historical ties, in preference to social integration at a local level. In this scenario, ritual practices reflect local traditions even though they may have been linked to symbolic associations with past practices, thereby influencing actions and behaviours and contributing to the reconstruction of group identity. As Stone notes, when cultures accept and reject different material, that material can take on new meanings; 'thus a material culture trait (artefact-type) shared by two cultures may have entirely different meanings in each.'[78]

The challenge is to identify what caused the Philistines as an emerging cultural group of mixed heritage to adopt/maintain mainly local practices. If the character of Philistine adornment is not comparable to that of the Aegean, but is more closely aligned with local Levantine practices by the Iron Age I–IIA, how then do we reconcile this situation with the human tendency to retain links to the past through personal appearance, as argued earlier in this volume? The answer may lie in processes of assimilation occurring much earlier in the

[73] Joyce 2001, p. 13.
[74] Joyce 2001, p. 21.
[75] For further references, see Joyce 2001.
[76] Meskell (2010, p. 14) argues for greater insight into the emotional stimuli affecting past behaviour. See also Joyce 2001, p. 12; Hitchcock 2013.
[77] Cf. Joyce 2001, p. 18.
[78] Stone 1995, p. 12.

Iron Age settlement of the region. An alternative argument is that the individuals of Tomb 1 were not Philistines in the traditional sense — that is, an identifiable ethnic group originating from one foreign location — but rather clan groups with strong local ties,[79] who lived amongst a population of mixed heritage that displayed elements of Levantine, Cypriote, Aegean, and Anatolian traditions

The patterns identified in the multiple tomb at Gath indicate that distinct local and non-local cultural attributes cannot be distinguished at this Philistine burial site. Existing group affiliations no doubt existed, and one might suggest that some of these possessed ethnic or cultural connotations, but attributes from various traditions were possibly personally selected in processes associated with intentional identity formation. During the Early Iron Age, Gath was situated within a network of interaction connecting the southern coastal plain with the Judean highlands. In this area, items of jewellery were no doubt circulating — acquired and exchanged based on accessibility and personal choice. The absence of non-local attributes in Gath's jewellery assemblage does not signify a lack of cultural or ethnic bonds to other regions; rather, in periods of intense contact — caused by factors such as trade, warfare, or migration — local communities may expressly conform to local traditions in order to negotiate new identities.[80]

6.2 OBJECT STUDY

It is possible to identify the adoption and adaptation of new forms of jewellery during the Early Iron Age, which appeared alongside — and in some cases completely replaced — earlier forms.[81] I present this discussion under the two subheadings: (1) *Tassels and Entanglement* and (2) *Anomalies and Embodiment.*

6.2.1 Tassels and Entanglement

During the Iron Age I to IIA, we see the introduction of new and distinctive bud-like earrings (Subtypes 1II.d–1II.e) and a unique variety of tassel earring (Subtype 1II.f) (see **Figs. 5** and **6**).[82] These new forms completely replace an earring with a trilobate flowerbud pendant (Subtype 1III.a) that had been prevalent in the 13th century within a limited sphere of the southern Levant (see **Fig. 7**). The trilobite flowerbud was replaced by the bud-like/tassel earring in a somewhat more concentrated sphere of influence, in what indicates a regional recognition of the symbols' significance. This process of changing a familiar form of earring follows a stage of increased culture contact in the southern Levant.

[79] Dental morphology indicates that while families were buried together in Tomb 1, unrelated lineages are also represented: Faerman *et al.* 2011, p. 41.

[80] Cohen 1985.

[81] Verduci 2014.

[82] See Sections 4.3.2.4–4.3.2.6.

6.2.1.1 Context

The initial, coarse version of the bud-like earring occurs at several sites in the Levant. These earrings, which suspend from a lunate hoop, are occasionally flared like Subtype 1II.e, but are more often rounded with incised lines in the manner of petals like Subtype 1II.d (**Fig. 41:II.d–II.e**). This latter form generally has a horizontal line incised approximately a third down from the top of the pendant and vertical lines incised below that line. In all cases, these earrings are made of copper alloy. Within the dataset, these earrings occur at the Baq'ah Valley, Deir 'Ain 'Abata, Far'ah, Madaba, and Sahab (**Table 8**). Similar examples also occur at Timnah,[83] and at the Wadi Fidan site 4 and Wadi Fidan 40 cemetery (**Table 9**).[84] Pendant Subtype 4V.a from Sahab may be another variant of the bud-like pendant.

INV #	SITE	UNITS	SUBTYPE	MATERIAL	DECORATION
238a	Far'ah	1	1II.d	Copper alloy	Fluted
325	Far'ah	1	1II.e	Copper alloy	Plain
345	Far'ah	2	1II.e	Gold	Plain
357	Far'ah	1	1II.f	Gold	Filigree
358	Far'ah	1	1II.f	Gold	Filigree
470	Far'ah	1	1II.d	Copper alloy	Fluted
503	Far'ah	1	1II.e	Copper alloy	Fluted
563	Far'ah	1	1II.d	Gold	Fluted
675	Far'ah	1	1II.f	Gold	Granulation
712	Far'ah	1	1II.f	Gold	Filigree
868	Nasbeh	1	1II.e	Copper alloy	Plain
988	Baq'ah Valley	1	1II.e	Copper alloy	Plain
1040	Baq'ah Valley	1	1II.e	Copper alloy	Plain
1041	Baq'ah Valley	1	1II.f	Copper alloy	Coiled
1042	Baq'ah Valley	1	1II.f	Copper alloy	Coiled
1142	Deir 'Ain 'Abata	1	1II.d	Copper alloy	Fluted
1143	Deir 'Ain 'Abata	1	1II.d	Copper alloy	Fluted
1168	Madaba	2	1II.d	Copper alloy	Fluted
1198	Sahab	1	1II.d	Copper alloy	Fluted
1199	Sahab	1	1II.d	Copper alloy	Fluted
1218	Sahab	1	1II.d	Copper alloy	Fluted
1219	Sahab	1	1II.d	Copper alloy	Fluted
1459	Tawilan	1	1II.f	Gold	Granulation
1460	Tawilan	1	1II.f	Gold	Granulation
1461	Tawilan	1	1II.f	Gold	Granulation
1462	Tawilan	1	1II.f	Gold	Granulation

Table 8. Bud-like/tassel earrings in the dataset

[83] Rothenberg and Bachmann 1988, fig. 55:15.
[84] Levy *et al.* 2005, p. 467; Beherec *et al.* 2014, figs. 9:5 and 9:30.

An interesting development appears to take place towards the end of Iron Age I, in that the floral form of the pendant transforms into a granulated tassel made of gold (Subtype 1II.f) (**Fig. 41:II.f**). Prototypes for tassel earrings with filigree decoration that is suggestive of granulation occur at Far'ah (see nos. 347–348, 675, and 712), where they are associated with granular disc beads — another form of metal jewellery that has previously been linked to the *Sea Peoples*.[85] The earrings at Far'ah clearly demonstrate the transition from a bud with petals and sepals, to what appears to be sepals covering tassel-like rows of granules. Four exceptional versions of these tassel earrings were discovered amongst a 10th–ninth century BCE gold hoard at Tawilan (nos. 1459–1462), while two coiled cones, possibly originally attached to tassel earrings, were also found in Cave A4 in the Baq'ah Valley alongside flared examples (nos. 1041–1042). It is not certain that the pendant in fact represents an actual tassel, but given its complex form, one might assume it was meant to accurately represent a particular object.

SITE	UNITS	SUBTYPE	MATERIAL	DECORATION
Athens[86]	1	1II.f	Gold	Granulation
Ashkelon[87]	1	1II.f	Gold	Granulation
Timnah[88]	1	1II.d	Copper alloy	Fluted
Wadi el-Makkuk[89]	1	1II.f	Gold/Electrum	Granulation
Wadi Fidan 40[90]	1	1II.d	Copper alloy	Filigree
Wadi Fidan 4[91]	1	1II.e	Copper alloy	Fluted
Wadi Fidan 40[92]	1	1II.e	Copper alloy	Fluted

Table 9. Flowerbud/tassel earrings in addition to the dataset

A large gold tassel earring demonstrating strong similarities to those from Tawilan, including the coiled wire cone, was found in 10th century BCE levels at Philistine Ashkelon (see **Table 9**).[93] This may represent a link between Philistia and Arabian trade routes, Tawilan being only 10 kilometres from Petra, a major resting place along the caravan route from Arabia. The construction of the most elaborate of the Tawilan examples has granules fixed to each other without a backing. The same method of construction is most closely paralleled by a rectangular gold and electrum granulated tassel earring found in the Judean desert at Wadi el-Makkuk,[94] although the pendant on the latter earring is constructed as a square, rather than round, shape. The Wadi el-Makkuk earring is strikingly similar to another from

[85] Refer to Section 4.7.5.2.
[86] Lemerle 1938, pl. 48:5, fig. 16.
[87] Stager *et al.* 2008a, fig. 15.47.
[88] Rothenberg and Bachmann 1988, fig. 55:15.
[89] Sass 2002, p. 23.
[90] Beherec *et al.* 2014, figs. 9:5 and 31.
[91] Beherec *et al.* 2014, figs. 9:5 and 30.
[92] Levy *et al.* 2005, fig. 31.
[93] King and Stager 2001, Ill. 155.
[94] Sass 2002, p. 23.

Athens, whose date is unclear but is proposed to also date to the 10th–ninth centuries BCE.[95] Based on the confident dating of the earrings from Far'ah, Madaba, and Timnah, it appears that the bud-like/tassel earring was an innovation of the Iron Age I and continued into the Iron Age IIA after which it is no longer seen.[96]

6.2.1.2 Textiles

Tassels or fringes on garment hems have a long tradition in the ancient Near East and the Aegean. It is feasible that tassel earrings referenced tassels on textiles, and although this notion is speculative, we can look to examples on clothing for possible insights. Tassels are known from the Ur III period, for example on the statue of Puzur-Ishtar, the governor of Mari, *ca.* 2060–1955 BCE.[97] The wearing of tassels to indicate the status of foreign elites was an artistic convention in Neo-Assyrian and Egyptian art.[98] From the time of Thutmosis III (*ca*. 1490–1436 BCE), wall paintings depict Syrians wearing tassels when bringing tribute to the pharaoh, while from the reign of Seti I (*ca.* 1302–1290 BCE) a wall painting depicts two Asiatic men who wear kilts with tassels hanging from the corners. That similar tassels were in fact worn in the north is known from a Hittite sculpture from Cagdin, near Bashar and Ain Tab.[99] Tassels were also prevalent in Syria, where they are associated with the kilt on representations commonly dated to the 14th–13th centuries.[100] In one series of illustrations from the tomb of Rekh-mi-Re (who served as Thutmosis III's vizier of Upper Egypt), foreigners thought to be Minoans wear similar tasselled kilts.[101] Meanwhile, kilts and tassels were popular embellishments in the Late Bronze Age Aegean, such as on the Late Helladic IIIC Warrior Krater from Mycenae[102] and in Middle Minoan III and Late Minoan II glyptic art.[103] The later eighth century Homeric epic also refers to plaited pendants, or tassels.[104]

Such tassels bring to mind the incised relief from the mortuary temple of Ramses III (*ca*. 1175–1144 BCE) at Medinet Habu. Each man depicted in the battles scenes and in scenes where *Sea Peoples* have been captured by pharaoh's army differs in appearance from the others by his dress, his hairstyle, or the presence or absence of a beard. Some of the clean-shaven captives wear a scalloped loincloth decorated from the hem corners with cords and tassels, in addition to helmets supposedly topped by feathers. This kind of helmet is characteristic of the *Sea Peoples*, and in the past has been particularly connected with the Philistines.[105]

[95] Lemerle 1938, p. 448, pl. 48:5.
[96] See also Sass 2002, pp. 21–33.
[97] Pritchard 1954, pl. 433.
[98] Bertman 1961, pp. 121–122.
[99] Wainwright 1963, p. 146, fn. 11; Bossert 1942, fig. 567.
[100] On the stele of Baal from Ras Shamra: Institut du Monde Arabe 1993, figs. 175–176; and on an ivory bed panel from Ras Shamra: Barnett 1982, pl. 22.
[101] Bossert 1937, fig. 545.
[102] Pendlebury 1930, p. 81.
[103] Zervos 1956, pls. 651c and 634.
[104] *Iliad* 2:445–449; in other lines of the *Iliad* as well (5:738, 15:229, 17:593, 18:204, and 21:400) the aegis is described as having pendants, and in 14:181 Hera is described as girding herself with a girdle furnished with 100 pendants.
[105] Verduci 2013.

6.2.1.3 Textual references

Extra-biblical texts teach us that the ornate hem was the symbolic extension of the owner himself — and specifically of his rank and authority.[106] I contend that the tassel (in textile or earring form) should be understood to be the extension of such a hem. These texts are supported by the visual evidence, which shows garments with fringed edges on Egyptians from the time of Thutmosis II (*ca.* 1490–1436 BCE) through to Assyrians from the ninth century BCE.[107] We can therefore interpret these tassels as symbolising a special status given their appearance on depictions of gods, kings, and warriors.[108] Thus, the more important the individual, the more elaborate and ornate was the embroidery on the hem of his or her outer robe.[109] In Mesopotamia, early Akkadian texts refer to *sissikta bat'qu* — 'to cut off the hem' — the implication of such an act being that when the hem is cut off, a part of the person's personality is removed with it.[110] Similarly, a husband could effect a Mesopotamian divorce by cutting off the hem of his wife's robe.[111] Alternatively, in exorcising an evil spirit, the exorcist might cut off the hem of the possessed person's garment.[112] The legal significance of the hem is frequently demonstrated in the famous archive of cuneiform tablets found at Mari; for example, a professional prophet or diviner would enclose a lock of his hair and a piece of his hem with his report to the king.[113] Both the hair and the hem served to identify the prophet, but more importantly, the piece of hem served to guarantee that the prediction was true. Sometimes the hem was impressed on the clay tablet as proof of identity,[114] such as in the event of a missing seal,[115] just as a person who cannot write might sign his name with a fingerprint.

6.2.1.4 Discussion

As discussed in Chapter 1, entanglement commences with transmission between different groups.[116] This transmission leads to transformation processes being set in motion (relational entanglement),[117] and by archaeologically visible evidence that an object had been given a new meaning (material entanglement). This is because the notion of transmission presupposes that variations might occur, whether by accidental mutation or intentional adaptation. In this latter scenario, *cultural intention* can be inferred — that is, transformation and integration

[106] For an overview, see Bertman (1961, p. 128) and Thomason (2011).
[107] Bertman 1961, pp. 121–122; Vogelzang and van Bekkum 1986, p. 278.
[108] Bertman (1961, p. 128) suggests that this special status is one reason why the biblical texts decree that tassels must be worn by the Israelites (Num. 15:37–41). In-depth discussion of this topic can be found in Vogelzang and van Bekkum (1986, pp. 276–278).
[109] Milgrom 1983, pp. 61–65.
[110] The exorcist then pronounces an incantation over his patient's detached hem: Ebeling 1931; Meier 1967.
[111] Finkelstein 1976; von Soden 1972, S.V. sissiktu 4a, p. 1051.
[112] Ebeling 1931; Meier 1967.
[113] See Kupper 1954, pl. 112:12–13; Birot and Lurton Burke 1964, pl. 8:25; and Dossin 1978.
[114] Hallo 1983, p. 8. See also Stephens 1931 and Milgrom 1981.
[115] Owen 1975, no. 245.
[116] Stockhammer 2012b, p. 49.
[117] Stockhammer 2012b, p. 50.

at a local level to intentionally create new cultural forms. In such cases, not only has the practice been appropriated (although not necessarily its significance), but also the object itself has been changed.

Recognition and understanding of these objects requires a combination of experience and memory transfer — that is, communicative memory[118] — between individuals that is invariably linked to context, whether spatial and temporal, or circumstantial. Taking the example of trilobite flowerbud earrings (Subtype 1III.a), it is evident that there was a limited concentration of this distinctive subtype in the eastern Mediterranean (especially in the southern Levant) during the terminal Late Bronze Age (see **Fig. 7**).[119] At this point, there is the sudden rejection of this earring with its hoop earrings and multi-component construction. Meanwhile, in the Iron Age I there appears a related (but significantly altered and coarser) bud-like pendant attached to a lunate earring that is made of copper alloy (Subtypes 1II.d and 1II.e). As noted earlier, this latter form clearly evolves into a tassel made of gold around the Iron Age I–IIA transition (Subtype 1II.f) — a motif associated with status and prestige throughout the eastern Mediterranean. The range and development of these earring subtypes is most clearly displayed at Far'ah (refer to **Table 8**). With these earrings, we see the appropriation and re-configuration of a local floral form contemporaneously with the appearance of *Sea Peoples* in the region. These appropriations would require a displacement of competing forms, such as the shift from trilobite flowerbud to bud-like/tassel, and a restructuring of the emotions and understandings that they prompt. Thus, the bud-like/tassel motif may have been meant to communicate a new cultural identity or perhaps to negotiate new cultural boundaries by pre-existing groups.

The trilobite pendant appears to be connected to local Levantine traditions whose inspiration can be found in the pomegranate, a pan-regionally familiar motif, and one that came to have a strong connection to Philistine cult.[120] I propose that the motif was recontextualised in the Early Iron Age by expressing Canaanite tradition through the lens of newly established regional identities. Given that this shift occurred around a period of transition in the southern Levant, this change may have been an intentional phenomenon in reaction to new local needs to express identity through links to motifs that were synonymous with status and prestige rather than cultural affiliation. The manipulation of the flowerbud to the bud-like pendant linked individuals with a time and place — reaffirming or re-interpreting regionally prescribed modes of self or group identification, while the transformation of the bud-like pendant made of copper alloy to the tassel made of gold no doubt acted as an active aspect of social stratification. That these earring subtypes represent new forms in the southern Levant (whose origins cannot be found elsewhere) might be explained as encoding material traditions that were linked to memories commencing in recent times, rather than from memories in the distant past as has been argued for cultural material in the Aegean.[121]

[118] Refer to Assmann 2008.

[119] See Section 4.3.3.1.

[120] Dothan, T. and Ben-Shlomo 2007. See also Artzy (1991) and Ward (2003) in relation to the Late Bronze Age.

[121] Cf. Maran 2011a, p. 170.

6.2.2 Anomalies and Embodiment

Processes of change in the Early Iron Age of the southern Levant, particularly evident in ceramic traditions,[122] are arguably associated with the redefinition of group identities at this time. While these processes may suggest a demographic movement of Aegean groups to the southern Levant, the evidence indicates the entanglement of several cultural groups within the region.[123] One might suggest that items of cultural and personal significance in the form of adornment might make the same geographic movement as these groups, but as has been argued in the previous chapter, only a small number of Iron Age I features within the jewellery assemblages of the southern Levant reflect non-local traditions.

6.2.2.1 Double wire spiral

The double-stranded spiral made of gold (Subtype 2IV.b) is one such anomaly that demonstrates Aegean affinities (**Fig. 44: IV.b**).[124] This form seems to have travelled to the Aegean via Italy where it is common in the Late Bronze Age, and from Italy via central Europe where it is more common than elsewhere (refer to **Fig. 8**). In Italy, mortuary evidence indicates that the tradition of wearing doubled-over spirals of wire as hair ornaments was common in female burials.[125] Despite the fact that these double-stranded spirals are so common in the Aegean (where they are more often referred to as hair spirals rather than as finger rings), only one of these objects is included in the dataset from the southern Levant — from Ekron in Philistia (no. 115).

6.2.2.2 Spectacle-spiral pendant

The spectacle-spiral pendant is formed from two antithetic spirals connected by a hoop (Subtype 4IV.c), which is typically made of gold wire, although copper examples occur (**Fig. 48: IV.c**).[126] This motif has a long history in the Near East from the Third Dynasty of Ur onward.[127] The tradition appears to have passed to Anatolia and from there to central Europe, the Aegean, and Italy.[128] The motif has high-status associations in the Aegean, where it appears on ceramics, weapons, and architectural features.[129] It also becomes a common decorative motif on Philistine ceramics.[130] Within the dataset, there are three of these pendants — one each from Far'ah (no. 600), Madaba (no. 1191), and Tawilan (no. 1474). In addition, another of these pendants comes from Wadi Fidan, where it was found in

[122] Ben Shlomo *et al.* 2008.
[123] Hitchcock *et al.* 2013; Maeir *et al.* 2013. Although the term *cultural entanglement* has been avoided in the past due to its negative connotations: Voskos and Knapp 2008, p. 678.
[124] Refer to Section 4.4.4.2.
[125] Bietti Sestieri and Macnamara 2007, p. 15, Type 1 hair ring.
[126] Levy *et al.* 2005, p. 467.
[127] Maxwell-Hyslop 1971, p. 23, pl. 22.
[128] Refer to Section 4.6.4.3.
[129] Hiller 2005; Popham 1965, pp. 316–342; Furumark 1941, p. 356.
[130] Dothan, T. and Zuckerman 2004, p. 333.

association with a tassel earring.[131] Despite the popularity of this motif in the Aegean, none of these pendants occurs in Philistia and as noted above, only one occurs in Cisjordan (no. 600).

6.2.2.3 Incised bangles

Open-ended bangles that have a lozenge or rectangular section (Subtype 3IV.c) occasionally occur with incised geometric designs (**Fig. 47: IV.c**). The majority of these bangles occur at 'Eitun, where they are made of copper alloy (nos. 212, 227, 228, and 232), although a somewhat similar one of silver comes from Beth Shean (no. 134). These bangles are comparable to Subtype 3IV.b that also comes from 'Eitun (nos. 232–233), although most of the latter subtype have punctated designs in wavy lines which appear to be a local tradition that has no relationship to *Sea Peoples*.[132] By contrast, bangles with geometric designs are most comparable to central European examples (see **Fig. 9**).[133] A similar pattern to that on bangle no. 227 appears in the Medinet Habu reliefs on an armlet worn by Ramses III while in battle with the Libyans,[134] and possibly on the *Sea Peoples* as well.[135] Despite the burial at 'Eitun being given a possible *Sea Peoples* identification on the basis of these bracelets, none of this subtype occurs in Philistia.

6.2.2.4 Non-metallic forms

One might argue that jewellery forms displaying non-local characteristics would have been made of less-expensive materials (such as stone, glass, faience, or shell), as these materials would have been more accessible to the general populace, but the evidence at sites such as Gath contradicts such a hypothesis. One of the few non-metallic forms is the pyramidal-head pendant made of haematite. This form has Anatolian and Cypriote prototypes, and presents a fascinating example of a foreign feature being introduced to the southern Levant in the Early Iron Age.[136] In the southern Levant, only one of these objects was found in Tomb 1 at Gath (B990258a).

One of the few other non-metallic forms introduced during the Iron Age I in Philistia is the *Conus mediterraneus* shell bead with a ground down labial side. Shells of this type are characteristic of the Aegean and Cyprus towards the end of the Late Bronze Age.[137] These objects were popular from the pre-Mycenaean period in Crete, and later throughout the Mycenaean world; in fact, 323 of these worked shells were discovered in Mycenae. In the southern Levant, *Conus* shells with their labial sides ground down are predominantly limited

[131] Levy *et al.* 2005, p. 467.
[132] Refer to Section 4.5.4.2.
[133] Refer to Section 4.5.4.3.
[134] Nelson 1930, pls. 24–25.
[135] Nelson 1930, pls. 34, 37, and 39. Although, what appear to be armlets on the *Sea Peoples* may just be bands at the sleeve hems of corselets.
[136] See section 5.1.2.2.
[137] Verduci 2014.

to Ekron, where 53 of these shells were discovered.[138] One unpublished *Conus* shell with a labial perforation also comes from Iron Age IIA levels at Gath, and another comes from Iron Age I Ta'annek in northern Cisjordan.[139]

6.2.2.5 Discussion

Emphasis is often placed on standard characteristics within an assemblage, with those characteristics that do not fit often ignored. In anomalies, we may find unusual possibilities for shedding light on the agency of individuals. The introduction of anomalies such as those discussed above may have been a strategy by some individuals or within some communities for reaching back into traditional memory and reusing forms worn by previous generations in the establishment of new identities.

Some of these objects might have been adopted for their specific symbolic associations. It is possible that double-stranded spirals or rings were objects of economic exchange between Italy and Greece.[140] In Mycenaean contexts, these objects are thought to have been included amongst burials or hoards for their value rather than their function as hair or finger rings.[141] It may be that individuals retained these objects as heirlooms in recognition of former status-driven customs. By contrast, the spectacle spiral originally possessed a magical or amuletic function related to fertility, and was recognised as a divine symbol originally associated with the Sumerian goddess Ninhursag.[142] This motif is believed to have still embodied amuletic characteristics during the Early Iron Age when it remained a common symbol, although it also has a utilitarian function as a hook.[143] Ethnographic parallels show that this symbol continued to be associated with women and fertility in Africa into the 20th century.[144] A different incentive may have inspired the use of incised bangles, which perhaps represented military rank. In addition to being shown in battle scenes in the Medinet Habu reliefs, these bangles were found near the fragments of two wide decorated copper alloy belts at 'Eitun, which is suggestive of warrior burial practices.[145] The presence of incised markings on these items of personal adornment might have represented the symbolic 'kill' of one's enemies.[146] Meanwhile, people of lower status who did not have access to more expensive materials may have used non-metallic forms such as the *Conus* beads.[147] Given that these shells symbolise water, life, and health, they too can be interpreted as fertility symbols — although shell objects also functioned as prestige goods,[148] and possibly as gaming pieces or toys.[149]

[138] Golani 2009, p. 154.
[139] Ezzughayyar and Al-Zawahra 1996, p. 79. Ta'annek (or Taanach) had intriguingly advanced steel technology: Stech-Wheeler *et al.* 1981.
[140] Eder and Jung 2005, pp. 488–489. Regarding the adoption of Italian symbols on foil onraments in the Aegean, see also Jung 2007.
[141] Dakoronia 2007, p. 62.
[142] Maxwell-Hyslop 1960, pp. 107–108; Frankfort 1944, p. 198, figs. 2–3; Van Buren 1945.
[143] See Maxwell-Hyslop 1960, p. 114.
[144] Arkell 1937.
[145] Edelstein and Schreiber 2000.
[146] Green 2006, p. 196, fn. 96; Verduci forthcoming B.
[147] Moorey 1999, p. 78.
[148] Trubitt 2003.
[149] Reese 1983, p. 356; 1985b, p. 353.

During the Early Iron Age, sites in Philistia were situated within a network of interaction connecting the coastal plain with Cisjordan and Transjordan. In this area, items of jewellery were no doubt circulating — acquired and exchanged based on accessibility and personal choice. In these regions, non-local personal ornaments were limited in number, and were arguably possessed by privileged individuals. However, the act of putting personal jewellery and other valuables into burials (the predominant source of ancient jewellery) displayed a conscious effort to give up objects of material worth rather than keep them in circulation, and was thus involved in the active negotiation of personal and clan identity.

The absence of non-local attributes in these depositions, once again, perhaps reflects strategies of intentional rejection of older forms by new communities in order to conform to local traditions, thereby negotiating new identities.[150] Meanwhile, anomalies in the corpus of metal jewellery can be argued to demonstrate either (1) individual agency in the acquisition of an object imbued with a sense of status or with a personally significant symbolic association, or (2) individual or community choices in retaining objects that evoked a memory of the distant past. Nonetheless, these anomalies do not appear to represent the practices of a broad cultural group — a group whom we might once have imagined would try to affirm their continued existence by consciously linking themselves to adornment practices from their place(s) of origin.

6.3 FINAL SUMMARY

In this volume, I have attempted to address three main aims: first, to create a typology of metal jewellery from 29 sites in the Early Iron Age southern Levant, the Aegean, and Cyprus; second, to apply statistical methods in order to identify patterns in the presence or absence of these artefacts within the Aegean, Cyprus, Cisjordan, Philistia, and Transjordan; and third, to interpret the significance of cultural material (in this case, metal jewellery) in the Early Iron Age southern Levant. These aims were achieved in the following ways:

1. The data obtained from this study was used to create a multiregional catalogue of metal jewellery (see Appendix C) from which a comprehensive typology was created (see Chapter 4);
2. As a result of this typology (and the classification of all 3900 objects assessed), the resulting data was examined by means of statistical analyses in a search for discernible patterns in and changes to material culture in the southern Levant (see Chapter 5); and
3. The role of jewellery was examined in a site-specific assemblage (that is, Gath) and in various object-specific assemblages (such as Subtype 1II.d–1II.f earrings). This final examination was treated as a prerequisite to formulating statements and conclusions that go beyond ones that are merely generalising (see above).

[150] Cohen 1985.

In summary: at the close of the 13th century, many important sites throughout the eastern Mediterranean were destroyed, severely depopulated, or abandoned. The cause of such widespread change is traditionally viewed as the result of a migration of *Sea Peoples* from the Aegean. However, it is likely that the *Sea Peoples*' migrations were the result of multiple factors deriving from the political, social, and economic collapse that occurred throughout the eastern Mediterranean at the end of the 13th century BCE.[151] At this same time, foreign elements and attributes appear in the southern Levant that occasionally combine with existing local material culture traditions. While such new features appear in the coastal region, hill country, and Transjordan, the archaeological evidence also shows strong continuity with Bronze Age traditions, although there was continued evolution of forms from the Iron Age I to IIA periods.

In order to assess metal jewellery as one aspect of Early Iron Age material culture, a theoretical framework has been employed that integrates both entanglement theory and the *cultural intention* of individuals or groups, which can be both variable and socially constructed.[152] The interpretation of dress and adornment in this volume supposes that corporal modes of expression are closely tied to cultural boundaries and other expressions of identity, including links to place, gender, age, and status-driven aspects of social practice. But while entanglement is a useful explanation for the appropriation and transformation of cultural material[153] — as in the discussion of the development of the bud-like/tassel earrings (Subtypes 1II.d–1II.f) — even here there is an unsatisfactory silence regarding individual agency and the motivations that drove the introduction of items that do not reflect heterogeneous processes. These individual displays are what in post-traditional studies are viewed as symptomatic of lifestyle practices that form the basis of self-identity.[154] I propose that such anomalies in the archaeological record represent the human tendency to define and differentiate oneself through adornment. This proposition shifts the focus to jewellery as a deliberate social strategy through which embodied identities were actively created.[155] In short: despite regional and cultural trends, individual choice appears to have played a far greater role in Early Iron Age adornment practices than the current literature suggests.

The statistical exploration of regional trends in metal jewellery in the Iron Age I–IIA suggests a pattern of evidence in the southern Levant with only limited influence from the Aegean. Such a reconstruction of this aspect of material culture runs counter to many commonly accepted Aegeo-centric models, particularly regarding Philistia.[156] The extent to which the *Sea Peoples* were responsible for the introduction of specific jewellery types or motifs remains unclear, especially those features that might be termed *Philistine*; perhaps a new, very broad definition of *Philistine* should be employed when discussing forms and motifs that have their roots in foreign traditions. One should be careful in attributing ethnic labels when distinguishing between jewellery of local and non-local origin in the southern Levant,

[151] E.g., Steibing 1980, pp. 17–19. Regarding famine in Anatolia, see Barnett (1975, pp. 360, 369).
[152] Cf. Knapp 2010, p. 196.
[153] Maeir *et al.* 2013.
[154] Barthes 1983, p. 87.
[155] Joyce 2005, pp. 138–158.
[156] Recent debates on this topic include those by Hitchcock and Maeir (2013); Maeir *et al.* (2013); and Davis *et al.* (2015).

where few strong distinctions can be made between regions, and where a strong local denominator underlies adornment practices, as reflected in the fact that similar jewellery subtypes are found at most sites in Philistia, Cis- and Transjordan.

Considering the spatial distribution of each jewellery category type and subtype, I can make six broad observations:

1. Of the five geographic regions, the greatest similarity is between the jewellery of Cisjordan and Transjordan;
2. Of the five geographic regions, the least similarity is between the jewellery of Transjordan and Philistia, closely followed by the Aegean and Philistia;
3. The jewellery from Philistia is closely linked to forms found in Cisjordan;
4. The jewellery from Cisjordan, Transjordan, and (to a lesser extent) Philistia shares some traditions with Cyprus (a region viewed as the *bridge* between the Aegean and Near Eastern worlds);[157]
5. Appropriations and transmissions that reflect the entanglement of multiple cultural interactions within the region influenced the evolution of the flowerbud earring into the tassel earring; and
6. The typology of southern Levantine jewellery does not preclude foreign interactions in the region, but non-local jewellery was limited to anomalies such as double-stranded spirals, decoratively incised bangles, and spectacle-spiral pendants. These forms appear to reflect individual or local community choices rather than cultural trends.

The presence of a large amount of jewellery in Tomb 1 at Gath confirms the importance of adornment as a component of funerary customs in the coastal plain. The deposition of items of jewellery in mortuary rituals was probably highly personal, while the objects themselves no doubt served an amuletic or apotropaic function and reflected the deceased's status amongst the mourners.[158] We might then expect that those interred would have been adorned in ways linked to customary practices — and in the case of Philistine burials, that these adornment practices would demonstrate non-local influences. Nevertheless, the grave goods in Tomb 1 at Gath suggest that few cultural attributes from non-local traditions were preserved in Early Iron Age Philistine adornment practices. Instead, the marked differences between Philistine and Aegean adornment practices appear to suggest a rejection of non-local customs. Apparently, Philistine adornment practices during the Early Iron Age (in the period immediately preceding that of a rather more integrated culture)[159] were more the result of intentional and individual strategies of identity construction, with these modes of display largely subsuming older notions of cultural identity.[160]

[157] In the past, this view of Cyprus as a 'bridge' has emphasised cultural development in that area as deriving from external stimuli, but it has been re-assessed to focus more heavily on internal developments: Knapp 2008, p. 68.

[158] Baker 2006, p. 21; McGovern 1980a; Wilkinson 1971, p. 196.

[159] The increasing degree of homogeneity in the material culture of the southern Levant during the Iron Age II period is most clearly evident in the appearance of Late Philistine Decorated Ware: Ben-Shlomo *et al.* 2004.

[160] Verduci forthcoming A.

The assumption has always been that although Aegean material culture declined in importance with the fall of the palatial system,[161] Aegean influence continued to predominate in Early Iron Age *Sea Peoples* cultures in the Levant, as suggested by pottery and other categories of material culture.[162] However, as Aegean influence is *not* evident in the adornment practices of the Early Iron Age southern Levant, it is perhaps time to refocus the debate about the ethnicity of these cultures away from such things as cultural origins, and more toward the ways in which these cultures chose to distinguish themselves from each other.

[161] Maeir *et al.* 2013.
[162] Maran 2011b, p. 283.

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APPENDIX A

METALS AND METAL TECHNOLOGIES

This appendix contains an examination of materials and glossary of technologies that correlate to Early Iron Age adornment practices. This volume is not a metallurgical study *per se*, but the fact that I analyse only metal jewellery necessitates a comprehensive discussion of the metals used in ancient jewellery and the processes involved in its production.

METALS AND METAL ALLOYS

Metal objects are particularly prone to degradation, especially in acidic and moist soils. Many metal objects from Early Iron Age sites, along with objects of vitreous or organic materials, are frequently degraded and fragmentary, especially in comparison with materials such as stone. Colours of vitreous materials and objects composed of copper alloys or iron, for example, are especially vulnerable to degradation. Certainly, this degradation increases the likelihood of overlooking information and can make it difficult to be certain of the presence or absence of particular techniques, materials, or stylistic details. Corrosion build-up on metal objects, due to environmental factors, consists of metallic remnants and mineral alterations. This corrosion can exist within and overlaying the original metallic object. If the object is badly corroded, the structural composition may be discernible only in the remaining corrosion.[1]

Most ancient metals are either naturally impure or the result of deliberate alloying, such as the combining of copper and tin to create bronze. Where possible, I refer to the work of excavators who employed techniques of metallurgical analysis to determine the elemental composition of jewellery objects. Optical and electron microscopy are generally the starting points in such analyses. Often this information is used in conjunction with X-ray fluorescence (XRF) to detect metallic compositions — a technique used by Christine Thompson to assess the purity of silver objects from Dor, Ashkelon, and Beth Shean.[2] Bronze objects from the Nasbeh collection have been analysed using both synchrotron x-ray radiation diffraction (XRD) and XRF, identifying those objects as leaded tin-bronzes.[3] Atomic absorption analysis of metals, for example of those found at 'Eitun, can also indicate the structure of the alloy.[4] Lead isotope analysis has proven informative in identifying ore provenance for items from the Aegean, Cyprus, and Egypt.[5] In Cisjordan, lead isotope analysis of the copper artefacts from Beth Shean indicates that the ore most likely originated in the Timnah mines.[6]

Following are a list of the metals and metal alloys commonly used in the production of ancient jewellery. Rather than list these in the order of which they might most commonly occur or according to their intrinsic value, they are listed here alphabetically.

[1] Regarding the examination and analysis of corrosion, see Scott 1991, pp. 43–47.

[2] Thompson 2007.

[3] Techniques that offer a non-destructive analysis both of the metallurgy of the objects and manufacturing methods, such as cooling rates and cold working, and preliminary XRD and XRF data pointed towards the neighbouring region of Edom as the origin of the artefacts: refer to Friedman *et al.* 2008, p. 1958.

[4] For example, bead IAA 68-1129 is of impure copper with almost no zinc or tin: Brewer 1992, p. 42.

[5] Gale and Stos-Gale have conducted extensive studies of copper and silver artefacts: Gale and Stos-Gale 1981; 1984; Stos-Gale 1988; 1997; Stos-Gale *et al.* 1991.

[6] Yahalom-Mack 2009.

BRONZE

Bronze is an alloy of copper and tin. Alloying copper with tin reduces its melting temperature and increases the fluidity of the molten metal (characteristics that likewise occur with the addition of lead or arsenic to copper), while also increasing its hardness.[7] When copper is alloyed with other metals the term 'copper alloy' is employed. A copper and tin alloy is the only correct combination to which to apply the term 'bronze', which I rarely use without metallurgical verification; such analysis is extremely rare, although the analysis of some objects from the Baq'ah Valley and Nasbeh is an exception.[8] Studies such as those by Muhly and Muhly for Michal have identified that lunate earrings are most commonly made of a tin-copper alloy with the occasional inclusion of lead or arsenic.[9]

Biblical sources inform us that tin was a valuable commodity (Ezekiel 27:12–17). The southern Levant had no known sources of tin, so this metal had to be imported for alloying with copper. Most ancient bronzes contain less than 17 per cent tin, although more than 1 per cent in the alloy is considered to be a deliberate addition.[10] A small number of bangles identified as bronze at 'Eitun have such low quantities of tin that it is suggested that they were made of reprocessed metal.[11] Similar patterns are noted at Mor, where the small amount of tin in objects suggests it was 'the dregs of metallurgical activities'.[12]

The bangles from Nasbeh in the Judean Hills of northern Cisjordan have varying traces of lead.[13] Lead ores (which generally contain silver) can be traced geographically using lead isotope analysis; these are discussed more fully under the subheading 'silver'. Lead was more readily available and therefore cheaper than tin. Arsenical copper was frequently in use in metallurgy across the eastern Mediterranean from the Early Bronze Age, although the intentionality of the alloy is not clear as arsenical impurities occur naturally in copper deposits.[14] In the southern Levant, arsenic was intentionally added to bronze (giving the alloy a silvery finish) from the Chalcolithic period onwards.[15]

An increase in bronze production and utilisation during the Early Iron Age is evident from sites in the Jordan Valley. The tombs of Beth Shan and the west of the Jordan River, and Deir 'Alla, Mazar, and Sa'idiyeh to the east have produced a large corpus of bronze artefacts, including tools, weapons, and jewellery. The association of metallurgy with Philistine related material (although not Philistine bronze working industries) is corroborated by finds at many sites in Cis- and Transjordan.

- At Mor, where Stratum VI (dated to 1230–1150 BCE) has four furnaces;[16]
- Zuweyid on the Sinai coast produced a crucible for copper working dated to the 11th and 12th century BCE in Stratum M, which also contained a significant amount of Philistine pottery;[17]
- The remains of two furnaces and crucibles in Stratum X of the Philistine site of Qasile, dated to the 11th century BCE;[18]
- Stratum II, Area A at Masos yielded examples of Philistine ware as well as the remains of an 11th century foundry;[19]

[7] Klein and Hauptman 1999, p. 1080.

[8] Regarding the Baq'ah Valley, refer to McGovern 1986, and for Nasbeh, refer to Brody and Friedman 2007, and Friedman *et al.* 2008.

[9] Muhly *et al.* 1989, p. 284.

[10] For a comprehensive and scientific discussion on the nature of ancient metals, including tin bronze alloys, see Scott 1991.

[11] Stech-Wheeler *et al.* 1981, p. 260.

[12] Stech-Wheeler *et al.* 1981.

[13] Friedman *et al.* 2008.

[14] E.g., Zwicker 1991.

[15] Levy and Shalev 1989; Ogden 2001, pp. 152–153.

[16] Waldbaum 1978. The presence of an Egyptian governor is suggested by the many Egyptian artefacts: Dothan 1977.

[17] Petrie and Ellis 1937, pls. L-216, L-198, 194.

[18] Maisler 1951, pp. 74–75; Mazar 1985a, p. 123. However, there is believed to be no evidence that the furnaces were actual copper smelting or casting furnaces: see Van der Steen 2008, p. 85.

[19] Kempinski 1977, p. 818; Fritz and Kempinski 1983, p. 21.

- Twelfth century BCE Level VI at Beth Shean held a crucible in the same level as Mycenaean IIIC:1b pottery;[20]
- Stratum III at Beth Shemesh, dating to the 12th–11th centuries and associated with Philistine pottery, contained three furnaces as well as slag and metal scrap;[21]
- Phase A and B at Deir 'Alla, dated to the 12th century BCE, yielded the remains of large copper smelting furnaces, including in Phase B a blowpipe with traces of copper inside the nozzle and tin remnants;[22]
- At Acco the remains of crucibles and melting ovens were unearthed with the remains of Cypriot and Mycenaean pottery;[23] and
- Furnaces, crucibles and tuyères were found at Zeror[24] and at Jemmeh.[25]

Tubb notes that either the Egyptians or the Philistines dominated sites across the southern Levant with evidence for bronze production during the Late Bronze Age–Early Iron Age transition.[26] The question of who controlled the metal working industry of the southern Levant and whether the *Sea Peoples* played a key role in the continuity of the bronze industry from the Late Bronze Age through to the Iron Age is not to be addressed here and is better left to those with expertise on the topic of Late Bronze Age and Iron Age metalworking industries.[27] It suffices to say that the Philistines had an active role in utilising metals for the production of weapons, tools, and personal adornment. The question of a decline in metalworking expertise in the early 10th century BCE is significant, however, in understanding the traditions of craftsmanship in the central Jordan Valley at sites such as Deir 'Alla and Sa'idiyeh.

Copper

The most common material employed in the manufacture of jewellery is copper alloy. Apart from its use in metallurgy, copper was also used as a colouring agent in glazes and glass. Copper generally contains metallic impurities, so the elemental composition of copper can provide chronological and geographic information. When copper is alloyed with other metals the term 'copper alloy' is employed.

Copper-producing regions included the Eastern Desert and the Sinai in Egypt,[28] as well as Timnah, now part of Israel, and Feynan in Transjordan, both of the latter two being in the Wadi Arabah. The best-known ancient metalworking scenes are those from the 18th Dynasty tomb of Rekhmire at Thebes.[29] A considerable amount of information is available regarding the Timnah mines and smelting sites from the fourth millennium BCE onwards; these are the largest copper mines associated with the Egyptians.[30] Copper-smelting activities in Feynan (and the Wadi Arabah region in general) indicate that the area should not be underestimated as a significant production centre for the southern Levant.[31]

The evidence of copper production in Late Bronze Age Cyprus is extensive, with copper oxhide ingots, copper workshops, and copper slag found in considerable quantities, despite no primary smelting sites having been discovered. Thus we have Muhly's equation of copper = Alashiya = Cyprus,[32]

[20] Fitzgerald 1930, p. 9, pl. 44:12; Hankey 1966, pp. 169–171. Level VI at Beth Shean has many Egyptian influences and was clearly an important Egyptian stronghold in the region.

[21] Grant 1934, pp. 52, 54, 56, and Map II; Grant and Wright 1939, p. 56.

[22] van der Steen 2008, p. 77; Franken 1960, p. 289; 1969, pp. 36–38.

[23] Dothan 1981.

[24] Ohata 1966.

[25] Petrie 1928. As is the case at Qasile, it is not possible to verify the furnace at Jemmeh as a metal furnace, it may very well be a pottery furnace: refer to Van der Steen 2008, p. 85.

[26] Tubb 1988b, p. 259. See also Muhly 1973 and Negbi 1974.

[27] Tubb 1988b; Muhly 1973; Negbi 1974.

[28] Giveon 1974; Chartier-Raymond *et al.* 1994.

[29] Davies 1943.

[30] Shaw 1995.

[31] Khouri 1988; Merkel 1983; Ben-Yosef *et al.* 2010.

[32] Muhly 1983, p. 210. *Contra* Merrillees 1987; Merrillees 2005; Iacovou 2001, p. 89. For comprehensive discussion on this unresolved topic, see Knapp 2008, pp. 300–303.

and the general acceptance that Cyprus was the main source of copper in the eastern Mediterranean during the Bronze Age.[33] Muhly notes, however, the inability thus far of chemical analyses to connect ores reliably with artefacts: 'The gap between expectation and performance has become so great that the entire effort has been singled out as one of the great disasters in the modern study of prehistoric archaeology.'[34]

Greek mineral resources are numerous, but the evidence of mining and smelting in Greece is limited.[35] Evidence from Chrysokamino shows a history of copper-smelting activity extending back to the Final Neolithic period,[36] and Late Minoan I copper oxhide ingots come from Tylissos, Ayia Triada, Zakros, Gournia, Kato Syme, and possibly Kommos.[37] A large copper mine is located at Ermioni in the Eastern Peloponnese, and in ancient times a copper deposit was exploited at Laurion in Attica.[38] Smaller deposits occur on Crete, in the Cycladic islands, and also in Euboea, Pelion, Thasos, Lesbos, Samos, and northern Greece. Stos-Gale and Macdonald also note it is possible that copper was imported into the region from mines in the former Yugoslavia, Bulgaria, Turkey, and also Feynan and Timnah in the Wadi Arabah.[39]

The largest quantities of Early Iron Age jewellery made of copper alloy come from Cis- and Transjordan, and the Aegean likewise has yielded a considerable quantity of copper alloy objects. Despite the vast quantities of jewellery recovered from Cyprus, only few copper alloy objects were discovered at Enkomi and Maroni, reflecting a possible preference for prestige metals (if not the preference of early archaeologists).

Electrum

Electrum is an extremely rare material that can be found naturally or as the result of intentional alloying of gold and silver. The metal occurs naturally in the Eastern Desert of Egypt, and possibly in western Anatolia.[40] The silver content of all native gold is in the range of 5–15 per cent; when reaching 15–30 per cent silver, the natural compound can be called electrum — although electrum is generally accepted as being a metal comprised of 75 per cent gold and 25 per cent silver.[41] Any gold with more than 20 per cent silver (also known as aurion silver) is much paler in colour than standard gold. In fact, the colour of the alloy may have been an important consideration in the ancient world, particularly in Egypt where it was symbolically associated with the moon and ritual purity. Gold on the other hand was associated with the sun and solar deities.[42]

Electrum is rare in archaeological finds from the Aegean and Cyprus. Electrum jewellery in the southern Levant is likewise rare. Electrum is formed into sheet metal, and used for objects such as the pendants, pins, rings, and earrings from Far'ah,[43] or cast in moulds, such as a crescent pendant from Gath (no. 20).

[33] In addition, tin is argued to have come from southeast Turkey: Waldbaum 1989, pp. 111–112; and from Central Asia or Afghanistan: Pernicka 1998; Muhly 1985; Penhallurick 1986, pp. 15–20, 79–83, 105–109.

[34] Muhly 1983, p. 211. Provenance identification is an ongoing field of research, particularly in Cyprus, e.g., Stos-Gale 1988; Stos-Gale 1997.

[35] Comprehensive discussion and references are available in Stos-Gale and Macdonald 1991.

[36] Muhly 2004, p. 287.

[37] Rehak *et al.* 1998, p. 123.

[38] Stos-Gale and Macdonald 1991, p. 255.

[39] Stos-Gale and Macdonald 1991.

[40] E.g., the Ovacik gold deposit of western Turkey contains trace amounts of electrum: Yilmaz 2002, p. 1829.

[41] Pliny's definition of electrum is an alloy of gold with twenty (or more) percent silver (Nat. Hist., XXXIII, 23).

[42] On the symbolic associations of both gold and silver in the Ramesside period, see Aufrère 1991, pp. 353–406 (gold) and pp. 409–423 (silver). The seminal study of colour by Brent Berlin and Paul Kay remains the standard for the linguistic approach to discussing colour and hues: Berlin and Kay 1969. That colour can be used to transmit a message symbolically has been explored more recently by Cleland *et al.* 2004.

[43] Laemmel 2003, p. 255.

Gold

Gold occurs in its usable form, either mined from reefs that are found in quartz veins or lodes, or collected as alluvial placer gold from rivers. Gold contains trace elements such as silver, copper, and platinum group elements to different degrees. The more silver the paler the tone, the more copper the more reddish; apart from decorative purposes, the two metals can also be added to adjust the hardness of gold. Gold mines in the Early Iron Age were located in the Eastern Desert of Egypt and Nubia,[44] and perhaps in the Sudan.[45] Gold might also have been sourced from Armenia, Anatolia, and Arabia,[46] and in the Aegean, from the Cycladic Islands, Macedonia, and Thrace.[47] The island of Skyros had small quantities of alluvial gold; Asia Minor possessed deposits south of the Caucasus; and Siberia and the Altai were both rich in gold, which would have reached the Greeks via the Scythians. However, Egypt was the principle source of gold in the Bronze Age.[48] Another possible source of gold was a rich alluvial deposit in the Melas valley near Antioch in North Syria.[49]

In general, gold objects are formed by hammering sheet gold, although casting techniques are also employed.[50] In some cases, there are additional steps in the manufacturing process, such as soldering to join elements together, or filigree and granulation for decorating purposes. Scenes of gold processing are known from the Ramesside tomb of Kha'y at Saqqara.[51] In ancient Egypt, gold represented the sun.[52] The magical properties with which the Sumerians endowed metals such as gold and silver may explain the continued relationship between religion and metalworking.[53]

Gold is a common component of the objects included from the Aegean and Cyprus in this dataset. By comparison, few items (mainly beads and earrings) made of gold come from the southern Levant; the greatest number of gold objects comes from Far'ah, although significant quantities also come from Megiddo and Beth Shean.

Iron

The evidence for the use of iron the southern Levant increases from the Late Bronze Age, and iron objects are distributed from Mesopotamia to mainland Greece. By the later part of the second millennium a greater variety of objects appears: jewellery, and ceremonial or ritual items, as well as the first appearance of utilitarian items. During the Early Iron Age copper alloy was still preferred for utilitarian purposes, but it is considered commonplace by the 10th century from Greece to the Levantine coast, for which there is both physical and literary evidence.[54] Several locations for the smelting of copper and working of bronze in Cyprus and the southern Levant are known for the Late Bronze Age–Early Iron Age.[55] The evidence for iron forging, on the other hand, is scarce.[56]

An argument for the development of iron metallurgy in Anatolia and the northern region of the Levant has been suggested.[57] Adornment items made of iron from burial contexts at Alaca Höyük and Tilmen Höyük date to the third millennium BCE.[58] In Anatolia, iron was increasingly dominant from the second millennium BCE, and was considered a metal of greater worth than silver and gold;

[44] Aldred 1971, p. 29; el Bedewi and Abdel Kader 1995; Müller and Thiem 1999, pp. 36–41.
[45] Ogden 2001, p. 161.
[46] Ogden 1982, pp. 22–23.
[47] Dyfri and Ogden 1994, p. 13.
[48] Higgins 1980, p. 8.
[49] Higgins 1980, p. 54.
[50] Altman 1979; Ogden 1982, pp. 34, 43; Ogden 2001, p. 165.
[51] Martin 1991, p. 131, fig. 90.
[52] Wilkinson 1971, pp. 108–109. For further discussion of the significance of colour and the apotropaic function of jewellery in the ancient world, refer to Limmer 2007.
[53] Langdon 2010, p. 330; Legrain 1937, no. 1498.
[54] Waldbaum 1980, pp. 82–83.
[55] Waldbaum 1978, pp. 59–62.
[56] E.g., the furnaces of Jemmeh: refer to Petrie 1928, p. 14. Cf. Forbes 1971, p. 121.
[57] Haarer 2001, pp. 267–268. See also, Zaccagnini 1990, especially p. 500; Yener 2000.
[58] For references, see Yalçın 1999, p. 177.

the strength and hardness of iron became associated with kingship and power.[59] Hittite texts also indicate that by the time of Hattuşili III (1285–1250 BCE), iron production was under the control of the king.

Iron was initially sourced from meteorites, but prior to 1200 BCE it was also smelted from natural ores in limited quantities.[60] The reasons as to why iron was first produced vary, as do notions as to where this first occurred, but the nature of iron manufacturing technology is reasonably well understood.[61] The most basic type of iron furnace is a bowl furnace, which is a hole in the ground or in a rock into which bellows can be directed through a tuyère and possibly a short dome-shaped superstructure of clay. Ore and charcoal are mixed together or laced in layers onto a hot charcoal fire and heated to a temperature of least 1150°C. As there is no outlet in the furnace for the slag to run through, it forms a cake at the furnace bottom while the bloom remains above. To access the bloom the clay dome is broken away and the furnace is cleaned.

A period of experimentation with iron from about 1200 BCE in Cyprus was thought to correspond to an increase in Aegean influence.[62] However, evidence points to iron being adopted in both the Aegean and Cyprus around the same time — although the metal might have been adopted more readily in Cyprus.[63] Each stage of this process of experimentation up to the Late Bronze Age/Early Iron Age transition can be documented and the results suggest that the first steps of committing a community's resources to the production of iron originated at sites such as Enkomi and Kition.[64] The appearance of iron in the Levant contemporaneously with the appearance of the Philistines was thought to be evidence for the movement of Aegean peoples through the eastern Mediterranean at the beginning of the Early Iron Age.[65] Waldbaum criticised this approach of attributing the introduction of iron to incursions of *Sea Peoples* as being 'clearly a remnant of nineteenth century invasion theories', or to the breakup of the Hittite kingdom disabling a monopoly that then enabled the spread of iron technology as 'diffusionist.' Both scenarios presupposed an advantage in the technology being kept secret, and being adopted as soon as the knowledge was made available.[66]

Waldbaum has demonstrated that the introduction of iron production in the Levant began in the 12th century BCE.[67] This process has been described as consisting of three stages (of which evidence is offered shortly):

- The first stage sees the limited production of iron in the form of small tools and occasional weapons during the 12th century, with Cyprus having facilitated much of the manufacture and exchange of such prestige objects;[68]
- This is followed in the 11th century by the continued presence of iron ornaments, increasing use of iron in weaponry at a wider distribution at sites, and the first use of iron for agricultural purposes;[69]
- Finally, during the 10th century, iron weapons outnumber copper/bronze items and take the place of copper/bronze in agricultural tools.

That iron implements were used on the Philistine plains before their adoption in the highlands was seen to corroborate biblical references to the Israelites of the late 11th century that mention a Philistine monopoly over iron metalworking for agricultural purposes:

[59] Yalçın 1999.
[60] McNutt 1990, p. 108.
[61] McNutt 1990.
[62] Catling 1964, pp. 199–202. Cf. Knapp *et al.* 1988.
[63] Sherratt 1993.
[64] Snodgrass 1980, p. 341. See also, Muhly 1995 and Sherratt and Sherratt 2001.
[65] Wright 1939. Cf. Tufnell 1953, pp. 385–396 (including a discussion of iron fibulae). See also comments by Dothan (1982, pp. 337–338).
[66] Waldbaum 1978, p. 67; McNutt 1990, p. 142.
[67] Waldbaum 1978; 1980; 1999.
[68] Sherratt 1993, pp. 60–62.
[69] Two of the earliest examples include a 12th–11th century BCE carburised pick from Mt Adir in the Galilee and a late 12th century knife from Qasile with evidence of carburisation; these can be compared to contemporaneous examples from Hala Sultan Tekke in Cyprus. For discussion and references, refer to Waldbaum 1999, p. 41.

> Now there was no smith found throughout the land of Israel: for the Philistines said, Lest the Hebrews make them sword or spears: But all the Israelites went down to the Philistines, to sharpen every man his share, and his coulter, and his ax, and his mattock (I Sam. 13:19–20).

Despite the evidence, some of the earliest iron comes from sites with which the Philistines are not associated.[70] Several such examples come from Transjordan, including the steel bangles from Baq'ah,[71] and unanalysed iron objects from Madaba.[72]

In Cisjordan, significant developments in metallurgy are evident at Megiddo from Stratum VIIA (12th century), which yielded the earliest iron objects at that city: one item of jewellery and one hook.[73] Stratum VIA (Late Iron Age I) also had iron artefacts: five knives, two small tools, and four items of jewellery. While Stratum VB was poor in metal artefacts generally, by Stratum VA–IVB (Iron Age IIA) iron begins to be represented in the manufacture of agricultural tools, although iron did not truly become adopted before Iron Age IIB. The same pattern emerges at Beth Shean, where only three small iron implements and one mass of bronze with an iron adherent date to Late Iron Age I, with a slight increase in finds from the Iron Age IIA.[74] Iron objects from the Iron Age I–IIA are also found at Taanach[75], Yoqne'am[76], Far'ah,[77] and Hazor[78] in the north of Israel, and Masos[79] and Arad[80], Lachish[81], Timnah[82], Beit Mirsim,[83] and Beth Shemesh[84] in the south. Iron artefacts in the central hill country come from Bethel,[85] from 'Ai (consisting of five jewellery items),[86] and Raddana.[87] As with the northern sites, the archaeological evidence from Philistia indicates that copperworking remained the main metal industry, with the onset of iron tools being associated with agricultural activity predominantly in Iron Age IIB. Iron artefacts have been found at Ashdod,[88] Ekron,[89] Azor,[90] Qasile,[91] and Gath, although the latter three are the only Philistine sites with identifiable iron jewellery.[92] The situation at Ashkelon remains unknown pending publication of the Early Iron Age material.

For Waldbaum, the key to understanding why the adoption of iron was not more widespread and initially limited to non-utilitarian functions lies in the fact that the technology of manufacture did not create a product superior to bronze. Only with the addition of carbon and with quenching does the hardness of iron exceed that of bronze, it can then be heat-treated by tempering to reduce brittleness and increase strength in order to make a superior metal.[93] However, carburisation appears more regularly in artefacts from the north than the south, indicating that the association of ironworking and the Philistines 'may be more tenuous than previously supposed.'[94] An alternative hypothesis

[70] Waldbaum 1999, p. 38; McNutt 1990, pp. 198–200.
[71] Notis *et al.* 1986, pp. 262–267, 272–278.
[72] Waldbaum 1978, p. 24; Pritchard 1980, pp. 20, 23.
[73] Loud 1948, pp. 92–129; Waldbaum 1978, p. 24. All these early iron finds from Megiddo come from Area CC.
[74] James 1966.
[75] Stech-Wheeler *et al.* 1981, pp. 248–255; Frick 2000, pp. 148–165.
[76] Yahalom-Mack *et al.* 2005.
[77] Chambon 1984, pls. 68–71, Table 3.
[78] Yadin *et al.* 1961.
[79] Crüsemann 1983, pp. 91–95.
[80] Gottlieb 2010, p. 95, fn. 12.
[81] Rothenberg 1975; Sass 2004; Waldbaum 1978.
[82] Mazar and Panitz-Cohen 2001, p. 217.
[83] Albright 1943, pp. 32–34.
[84] Waldbaum 1978, p. 25; Herzog and Giveon 2004, pp. 221, 231; Bunimovitz and Lederman 2009, p. 116.
[85] Finkelstein and Singer-Avitz 2009, pp. 38–39.
[86] Waldbaum 1978, p. 25; Callaway 1993, p. 45.
[87] Waldbaum 1978, p. 25.
[88] Dothan and Ben-Shlomo 2005, pp. 126–127, 165, 215, 224.
[89] Ben-Shlomo 2006a, pp. 193–194; Dothan 1989, p. 158.
[90] Ben-Shlomo 2012; Dayagi-Mendeles and Ben-Dor 2002, fig. 5.24:14.
[91] Mazar 1985a, p. 9.
[92] For further discussion on a comparative analysis of metal usage in Early Iron Age strata from Israel, see Gottlieb 2010, pp. 100–106.
[93] Waldbaum 1978, pp. 68–69.
[94] Waldbaum 1999, p. 42.

suggests that the interruption of trade dependent on palace institutions around 1200 BCE affected the distribution of copper and tin to such a degree as to necessitate use of an alternative metal, although as Zaccagnini points out, copper and bronze continued to be supplied for artefacts from the 12th century BCE into the first millennium in both the Near East and Cyprus.[95]

While Waldbaum hesitated to identify the *Sea Peoples* with the introduction of iron into the Levant (despite their link to Philistine contexts),[96] more recently her research supports the argument that the *Sea Peoples* brought this technology to the Levant.[97] Based on the distribution of iron artefacts with Mycenaean IIIC pottery in the Aegean and Cyprus, Muhly also discusses the question of iron technology and the role of the Philistines in its introduction to the Near East, and defends the traditional view that associates the appearance of iron in Philistia with the *Sea Peoples*.[98] Regardless of how iron first appeared in the southern Levant, it appears only rarely during the Iron Age I.[99]

An argument has been made for the development of ironworking as a functional response to endemic warfare at the close of the Late Bronze Age and the resultant spread of the 'cut-and-thrust' (Naue II) sword. This weapon, which can be traced back to northern Europe, was part of the Mycenaean martial assemblage from the 13th century,[100] and was adopted in Cyprus shortly thereafter. Renderings of seafaring warriors on pottery from the close of the Late Bronze Age in the Aegean often depict them bearing the Naue II sword, and Naue II swords were among armour and weaponry found in burials at Late Helladic IIIC Achaea.[101] Examples from the Levant include a Naue II sword from level F at Hama (*ca*. 1200–925 BCE), thought to display features associated with the *Sea Peoples*,[102] and a possible 11th century BCE example from Megiddo.[103] Another iron sword from Grave 102 at Sa'idiyeh was also thought to reflect Aegean influences.[104]

P. R. S. Moorey notes that the inquiry into the bronze industries of the Levant originally arose from an investigation into the changing nature of the Aegean during the Early Iron Age.[105] Archaeometallurgical inquiry into the mining of ore, the process of creating metal, and the finished product is a relevant approach to identifying typological characteristics for craftsmanship from different regions. Moorey proposes that the processing of iron for the manufacture of military equipment was instrumental in the increased use of iron in agriculture in Canaan.[106] The increased resources required to manufacture iron (as compared to copper or bronze) and access to the raw materials depended on 'what would now be called an effective industrial infrastructure.'[107] Moorey points to the unsatisfactory data drawn from the material evidence, whereby the distinction between different artistic traditions in the repertory of Iron Age artefacts is attributed to a multitude of production centres rather than fewer major ones.[108]

Silver

Silver was rare and (unsurprisingly) precious in ancient times;[109] that silver was highly prized in Egypt was no doubt due to its scarcity in contrast to gold.[110] Ancient records indicate silver came from an Asiatic country to the north of Egypt, and from Libya.[111] References to gold in the

[95] The complex issue of the transition from copper to iron is considered in Zaccagnini 1990 (especially pp. 496–497).
[96] Waldbaum 1978, pp. 67–68.
[97] Waldbaum 1978; 1982.
[98] Muhly 1982, pp. 49–50.
[99] Mazar 1985a, p. 9.
[100] Desborough 1964, pp. 54–58; Molloy 2005; 2010. For the role of northern Italy in Naue II production, see Jung 2005, p. 476.
[101] Regarding seafaring warriors' costume and weaponry, see Yasur-Landau 2013b and Verduci 2013.
[102] A brief overview and references is provided by Bienkowski 1982, p. 82.
[103] Bouzek 1985, p. 126.
[104] Pritchard 1968, p. 108; Pritchard 1980, fig. 52:10. Cf. Shalev 2004, pp. 26–65.
[105] Moorey 1988.
[106] Moorey 1988, p. 25.
[107] Moorey 1988, p. 25.
[108] Moorey 1988, pp. 26–27.
[109] Aldred 1971, p. 33; Gale *et al.* 1981.
[110] Muhly 1998, p. 318.
[111] For discussion and references, see Gale and Stos-Gale 1981, p. 104.

Amarna letters make clear that the King of Alashiya (possibly identified as Cyprus) desired silver rather than gold:

> You are my brother. May he send me silver
> in very great quantities. My brother, give me the very best silver...[112]

The extraction of silver possibly originated in Asia Minor in the third millennium BCE, and the silver mines in Asia Minor were the principal source of silver in the ancient world.[113] At present, the known sources of the silver used in the southern Levant during the Early Iron Age include the Levant, Anatolia, Arabia,[114] and the Aegean.[115] Mines also operated in Thrace, Macedonia, and the Cyclades from the Late Bronze Age. Christine Thompson's provenance studies of silver hoards demonstrate that by the 11th century Sardinia surpassed Anatolia as the primary supplier of silver to the Levant, which is perhaps explained by the collapse of palatial economies after 1200 BCE.[116] Sardinian silver in all of the hoards dated to after 1200 BCE — along with the chronological reliability of the Ashkelon silver hoard — offer clear evidence of economic activity between Sardinia and Cisjordan during the Early Iron Age. Noël Gale and Zofia Stos-Gale's lead isotope analysis proved remarkable in being able to determine the source of the ore when samples from mineral deposits were available.[117]

Although the lack of Aegean silver might point to the so-called Aegean *Dark Age*, it is unclear why the earliest Iron Age levels of *Sea Peoples* occupation in the southern Levantine coastal plain have not retained Late Bronze Age Aegean silver heirlooms.[118] Silver made its appearance in Cypriote jewellery in the Early to Middle Bronze Age is typically alloyed with lead;[119] this early jewellery is light-coloured and coated in powdery rust, but later becomes darker and heavier.

Steel

Like bronze, steel (carburised iron) is rarely subject to metallurgical analysis. Iron is not as strong as bronze prior to carburisation, but it is stronger afterwards. The carburisation process requires iron objects to be embedded in a charcoal fire to absorb carbon.[120] The assumption that the Philistines introduced iron technology into the Levant is logically dependent on the notion of iron's superiority over bronze. The steeling of iron should, according to this hypothesis, be reflected in the archaeological record within Philistia. Evidence points to the production of steel from the 10th century in Cisjordan.[121] Results from Philistia on the other hand, other than a single carburised dagger from

[112] Moran 1992, pp. 107–109: Letter 35, lines 19–20. Further references are found at lines 43–44 and in Letter 37, line 18.

[113] Higgins 1980a, p.10.

[114] Anatolian sources of the ore include the Taurus Mountains and Malatya in Degirmentepe.

[115] Mishara and Meyers 1974. Silver also occurs in the north Aegean at Chalkididi, Thasos or the Troad, at Siphnos, and on several Cycladic islands, including Antiparos, Kythnos, Seriphos, Syros, and Thera. On the Aegean or Anatolia as a possible source of the silver in the Tôd treasure, refer to Ogden 2001, p. 170.

[116] Ore sources include Arcu Correboi, Argentiera, Calabona, Canale Barizone, Capo Marargiu, Fenugu Sibiri, Guzzura, Monte Narba, Monteponi, Monte Sissini, Nebida, Nulvi, Ozieri, Rosas, S. Giovanni, Serra Illixi, Sos Enattos, Su Muloni, and Terra Paddeda. Although production centres and silver-working remains cannot be located in the archaeological record, which Thompson suggests is an indication of the low value placed on silver by the Nuragic culture: see Thompson 2007, pp. 4–5, 64, n. 55. Iron Age I hoards analysed from Cisjordan included Beth Shean, Ashkelon, Keisan, Dor, and perhaps Eshtemoa and Ein Hofez dated to Iron Age IIA: Thompson 2007, Table 1.

[117] The publications relating to this topic include, but are by no means limited to, those by Gale (1985) and Stos-Gale (1988; 1997).

[118] Chin 1988, pp. 61–61. Ethnographic research of heirlooms includes those by Lillios 1999; Joyce 2000; Straight 2002.

[119] Myres and Ohnefalsch-Richter 1899, p. 33.

[120] Stech-Wheeler *et al.* 1981, p. 246.

[121] Stratigraphically secure iron objects from Taanach demonstrated deliberate carburisation and the regular use of steel in the Jezreel Valley: Stech-Wheeler *et al.* 1981, p. 255. The awareness of the different qualities of iron is apparent in ancient texts: refer to Yalçın 1999, p. 181.

Tomb 240 at Far'ah, demonstrate inconclusive evidence of carburisation, although this is perhaps due to a loss of carbides through corrosion.[122]

Eleven iron/steel bangles and rings from the Baq'ah Valley in central Transjordan reflect a minor steel industry in the region towards the end of the Late Bronze Age and Early Iron Age.[123] Many iron artefacts from other sites in the region have not been analysed, so it is unknown whether these might also be of steel. A single piece of steel dated to the Late Bronze Age comes from Pella, which poses the intriguing possibility that jewellery from an as yet unpublished Early Iron Age tomb with over 100 burials includes steel objects.[124] Such a finding would correspond to findings from the analysis of other iron artefacts found within Cisjordan.[125]

METAL TECHNOLOGIES

A wide range of manufacturing technologies parallels the wide array of jewellery types and subtypes. Only the main technologies are discussed below, but certain other techniques, such as riveting for joining, surface coatings, and working methods such as turning and drilling, were used in antiquity; these and many other technologies are well dealt with by experts in the field of ancient metal technologies.[126]

Annealing

In the annealing process, metal is heated until red-hot and then plunged into cold water. This process serves to release the strain on the structure of the metal, rendering it pliable once again.

Casting

By using moulds, often of hard stones, to form objects such as rings and earrings, standard shapes could be achieved. Generally these moulds, within which molten metals would be poured, would have pouring channels and grooves for attaching the parts together. Another important technique for casting metal was the lost-wax method (*cire perdue*), which involves a coating a wax model in layers of a hardening substance such as clay. A hole would be drilled through the hard exterior and then the object heated so that the wax ran out of the hole. Molten metal could then be poured in and when set, the mould broken to retrieve the object.

Colloid hard soldering (diffusion bonding)

This joining technique does not require metallic solders, and is used in delicate decorative methods such as granulation and filigree, or where soldering joins are not visible. The process is reliant on the fact that the melting point of gold (or silver) and copper when they are in contact is lower than the melting point of either metal separately. A piece to be joined to gold is alloyed with silver and/or copper, or in the case of silver, alloyed with copper. These pieces are then glued together with a mixture of glue and ground-up copper salt, and heated to 890°C at which point the alloy melts and the join forms. The melting point of pure gold is 1063°C and for silver is 961°C, so there is little danger of overheating the metal to the point where it itself melts.[127] The process is much more difficult to achieve than the alloy soldering method described below, but the lack of colour change and the benefits when constructing delicate pieces were advantages. The earliest known example of colloid hard soldering dates to the Early Dynastic Period at Ur (*ca.* 2500 BCE).[128]

[122] No evidence came from Ashdod and Jemmeh, and the evidence is inconclusive at Qasile: Stech-Wheeler *et al.* 1981, pp. 257–259, 263.
[123] McGovern 1995, p. 31.
[124] McGovern 1995, p. 31.
[125] Muhly *et al.* 1990, pp. 159–176.
[126] E.g., Scott 1991.
[127] Higgins 1980a, p. 32.
[128] Maxwell-Hyslop 1977.

Hard soldering (brazing)

This method requires two pieces of metal to be placed in close proximity and small pieces of solder to be placed on the join. A flux such as natron (a naturally occurring mixture of sodium carbonate)[129] is placed over the solder to prevent oxides forming that would keep the solder from flowing; heat is then applied to the object, and in particular to the solder, so that it melts and is drawn between the two pieces. In gold objects, this can often be identified by a difference in colour. Often the solder will have a reddish tone, as it will contain higher concentrations of copper so as to require a lower melting temperature. Pitting, or an 'orange peel' effect, can sometimes be seen around joints that have been overheated. This process was used in Mesopotamia from the third millennium BCE and in Minoan jewellery from *ca.* 2400 BCE.[130]

Plating

Occasionally, foil is plated onto objects made of a less expensive substance in order to give them weight and strength. In the Mycenaean period, magnetite sand was sometimes used,[131] and in the Levant, evidence exists of the use of materials such as copper alloy and bitumen.

Polishing

Irregularities could be removed with an abrasive such as sand, pumice, or emery mixed with a liquid such as oil to scrub the object.[132] Burnishing with a stone to attain a smooth finish often followed.

Sheet and foil

Gold is very malleable and can be hammered into thin sheets, as can silver and electrum to varying degrees. As metal can become brittle with repeated cold hammering, occasional annealing is necessary. Generally, if the sheet is strong enough to be bent for rings, beads and pendants or worn as bands and mouthpieces, it is referred to as sheet metal; if it is so fine that it is likely to be used only to plate items such as rings, earrings and pins, it is referred to as foil. In sheet metal items, such as diadems and mouthpieces, the cut edges are often visible.

Welding

Welding in antiquity took two forms: pressure welding and surface welding (also known as fusing or sintering). The former method could be used on unheated gold by employing pressure or percussion to join two pieces together, while the latter involved heating two elements to a point at which they are just malleable. After this, the pieces are brought together and cooled, whereupon they adhere to each other.

Wire

The simplest objects are of plain wire; this wire could be made by pouring molten metal into a clay or stone mould as a rod, after which the object could be worked by annealing and hammering. Alternatively, the wire could be made (1) by rolling a block-twisted strip of metal-sheet and then working it to remove most surface lines, (2) by strip-drawing, whereby a thin strip of sheet-metal is drawn through holes of decreasing size, so that the edges of the strip eventually overlap, or (3) by strip-twisting a single strip of sheet-metal that coils around itself or over a fine rod that is then removed,

[129] For compositional properties, see e.g., Brill 1988, p. 270, Table 9.9.
[130] Higgins 1980a, p. 33.
[131] Higgins 1980a, p. 33.
[132] Ogden 1982, pp. 86–87.

after which the wire can also be rolled and worked to remove surface lines. Most often, it is not possible to distinguish between these techniques; however, when fragments are hollow it confirms that the wire is strip-drawn or twisted.

DECORATIVE TECHNOLOGIES

Significant decorative technologies include the arts of repoussé, cloisonné, filigree, and granulation, as well as engraving, twisting, braiding, and ribbing.

Braiding

Two or more strips of wire could be plaited or twisted together to create a decorative feature that has the dual purpose of embellishing and concealing joins. This is a technique seen most frequently on gold jewellery from Cyprus.

Chasing

Creating a design on the surface of the sheet metal by indenting the material (rather than removing the material) using a blunt-nosed chisel is known as chasing. A chasing tool is often used to highlight details after a design has been embossed.

Cloisonné

Cloisonné is often seen in Egyptian jewellery and dates from the fourth Dynasty.[133] It is formed by creating wire shapes on a solid surface that are then filled with inlays of stone, glass, or faience. In the Levant, no evidence of cloisonné exists for the Early Iron Age, but Late Bronze Age examples derive from Lachish[134] and Megiddo.[135]

Crimping

This is the mechanical joining of two pieces of metal using an overlap.

Engraving

In engraving, a sharp tool is used to scrape away a furrow of metal to create designs such as those found in the bezels of signet rings.

Filigree

Filigree is a technique in which thin wire is soldered to a metal surface.[136] From the third millennium, this technique is known from Troy (2500–2300 BCE), Ur III,[137] and Umm el-Mara (2300 BCE). In the southern Levant, this form of decoration is seen on earrings from Tawilan that date to the Early Iron Age.[138]

[133] Andrews 1990, p. 88.
[134] Tufnell *et al.* 1940, pl. 36:102; Tufnell 1958b, pl. 25:9.
[135] Loud 1948, pl. 225:12–13.
[136] Lemaigre 1983.
[137] Woolley 1934, pl. 138.
[138] Ogden 1995; Maxwell-Hyslop 1984.

Granulation

The complex decorative technique of granulation refers to the decorating of an object with tiny granules of gold using a minimal amount of solder so that the drops rest on the surface or are raised on discrete pedestals.[139] In either case, they cast a sharp shadow and stand out in high relief. The granulation technique, by which small spheres of gold or silver are joined to each other or to a metal sheet by colloid hard soldering or a copper salt, requires knowledge of the physico-chemical properties of the materials along with a high level of skill. The technique is particularly difficult because of the different steps and methods of production, including making granules, fixing and welding, finishing, and surface rendering. Whatever the method used, the temperature control of the furnace during production is a crucial matter for the quality of the joins made, but also in order to preserve the roundness of granules and the visual homogeneity of the gold surface of the object. The excellence of the granulation can be judged by the artistic quality of the piece itself, the size of the granules, the accuracy with which they are manufactured (that is, whether they are perfectly rounded or of irregular outline), the uniformity of size of the granules on a given specimen, the amount of solder used, and the relation of the granules to each other.

The complex skill required to produce granulation has its roots in third millennium Mesopotamia, Anatolia, and Greece. Examples are generally though to come first from the Royal Tombs at Ur dated to *ca.* 2500 BCE[140] and from Troy a century later.[141] Contemporary examples are also known from Poliochni,[142] the Akkadian period at Brak, and Asmar dating to Ur III,[143] and then in chronological order from Kültepe, Byblos, Assur, Ebla, and by the middle to Late Bronze Age from Dilbat, Megiddo, and ʻAjjul, followed by Alalakh and Kamid el-Loz.[144]

In the southern Levant, perhaps the most elaborate assemblages of granulated jewellery appear during the Late Bronze Age (or possibly as early as the Middle Bronze Age) at ʻAjjul.[145] Granulation appears during the Mycenaean period in Greece, Crete, and Cyprus.[146] On Crete, one of the earliest examples of granulated jewellery is the Middle Minoan Mallia bee pendant from the Minoan necropolis of Mallia-Chrysolakkos.[147] It exhibits a heraldic composition of granulation in combination with filigree work on the bodies of the bees positioned at either side of a disc — possibly a honeycomb. Mycenaean granulation adopted from Crete, such as that displayed on the Acropolis Treasure beads, is coarse by comparison.[148] Punching a pointed object from the reverse side to form raised dots is a technique that emulates granulation; this can be seen on artefacts from 2500 BCE Mochlos and 2000 BCE Troy.[149]

Romain Prévalet recently attempted to analyse the nature of the transfer of knowledge in jewellery technologies in the eastern Mediterranean during the third and second millennium BCE.[150] He tentatively privileged Troy over Sumer as the originator of granulation processes, and the northern Levant as a receiver and distributor of such influences. He claimed that the granulation technique at Troy was stylistically different from that of Sumer. His evidence rests on the granulation technique used on an earring from Troy that exhibits one of the oldest instances of soldering using copper salts, resulting in small neck-shaped joints and the visual homogeneity of the gold surface of the object.[151]

[139] This subject has been addressed by several authors: e.g., Higgins 1980a, pp. 19–21; Ogden 1982, pp. 58–70; Lilyquist 1993; Politis 2001; Prévalet 2010.

[140] Maxwell-Hyslop 1977; Moorey 1985, p. 91. For examples from the Neo-Babylonian period at Uruk, see van Ess and Pedde (1992, pl. 77:924).

[141] Lilyquist 1993, p. 33; Blegen *et al.* 1950.

[142] Lilyquist 1993, p. 33; Bernabò-Brea 1976, p. 286.

[143] Mallowan 1947, p. 74.

[144] For chronology and discussion, see Lilyquist 1993, pp. 33–51; also Golani 2013, pp. 27–28 regarding technology and relevant bibliography.

[145] Barnett 1951; Negbi 1970. Cf. Ziffer (1990, p. 54) and now Negbi, who prefer the Middle Bronze Age date: refer to Lilyquist 1993, pp. 47–48.

[146] Curtis 1915–1916.

[147] Nicolini 1990, pp. 132–133. A number of examples appear even earlier in Crete: refer to Thomas 1938–1939, p. 76.

[148] Thomas 1938–1939, pp. 75–76.

[149] Schmidt 1902, p. 232, no. 5875.

[150] Prévalet 2010.

[151] Prévalet 2010, p. 33.

Incising

Incising involves a similar technique to engraving, but less force is required creating a scratched surface rather than a furrow.

Pointillé

Pointillé is a decorative technique consisting of punching a metal surface with a sharp tool to create a fine pattern of dots. This style is particularly common on Late Cypriote diadems and mouthpieces, and on the bezels of Submycenaean shield finger rings. The former are punched from the underside and the dotted designs are quite pronounced, while the latter are often delicately punched from above, with the dotted designs often filled with patina.

Repoussé

The practice of embossing or pressing a design from the reverse side of sheet metal is termed *repoussé*. The metal is often hammered on a soft substance such as bitumen to allow the surface to be raised in a relief decoration. Multiple copies of a design can be achieved by working over a negative or positive mould.

Ribbing

A wire can be ribbed or beaded by being rolled under a shaped tool to create parallel grooves and ridges around its circumference. This technique was especially popular for decorating toggle pins and fibulae.

APPENDIX B

METAL JEWELLERY WITHIN THE DATASET

Below are the details for each object included within the dataset (by geographic region and by site). Additional details for each object can be found online (https://minerva-access.unimelb.edu.au/handle/11343/91078) in Catalogues A and B within Appendix C. Unless otherwise stated within brackets in the 'Item Type' column, each entry represents a single item. Where there is no available excavation number for an object, 'N. No.' is entered.

PHILISTIA

Ashdod

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1	IrA I	Stratum XIII	N. No.	Area H	Pendant	Gold
2	IrA I	Stratum XIIb	N. No.	Area H	Earring	Electrum
3	IrA I	Stratum XIIb	N. No.	Area H	Pin	Copper alloy
4	IrA I	Stratum XI	N. No.	Area H	Bangle	Copper alloy
5	IrA I	Stratum XI	N. No.	Area H	Earring	Copper alloy
8	IrA I–IIA	Stratum X	N. No.	Area H	Ring (2)	Copper alloy

Azor

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
9	IrA I	Tomb D79	79d/46	Area D	Earring	Iron
10	IrA I	Tomb D58	58d/19B	Area D	Bangle	Copper alloy
11	IrA I	Tomb D63	63d/9	Area D	Mouthpiece	Gold
12	IrA I	Tomb 49	49/11	Area D?	Bangle	Copper alloy
13	IrA I	Tomb 8	8/92	Area D?	Bangle	Copper alloy
14	IrA I	Tomb 42	42/28	Area D?	Pendant	Copper alloy
15	IrA I	Tomb D56	N. No.	Area D	Bangle	Iron
16	IrA I	Tomb D79	79d/22	Area D	Fibula	Copper alloy

Ekron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
93	LBA–IrA I	Pre Stratum VIIB	N. No.	Unknown	Pendant	Gold
94	IrA I	Stratum VIIA	6855	Field IV	Ring	Copper alloy
95	IrA I	Stratum VIIA	6870	Field I	Ring	Copper alloy
96	IrA I	Stratum VIIA	6699	Field I	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
97	IrA I	Stratum VIIB	7135	Field I	Pendant	Gold
98	IrA I	Stratum VIIB	7443	Field X	Ring	Gold
99	IrA I	Stratum VIA	4828	Field IV	Ring	Copper alloy
100	IrA I	Stratum VIB	5129	Field IV	Earring	Copper alloy
101	IrA I	Stratum VIB	5140	Field IV	Ring	Silver
102	IrA I	Stratum VIB	6223	Field IV	Ring (2)	Silver
103	IrA I	Stratum VI	5125	Field IV	Spiral – hair ornament	Copper alloy
104	IrA I	Stratum VI	3097	Field IV	Pin	Copper alloy
105	IrA I	Stratum VA	4844	Field IV	Earring	Copper alloy
106	IrA I	Stratum VA	2500	Unknown	Pendant	Gold
107	IrA I	Stratum VA	1746	Field IV	Pin	Copper alloy
108	IrA I	Stratum VB	5915	Field IV	Earring	Gold
109	IrA I	Stratum VB	4733	Field IV	Ring	Copper alloy
110	IrA I	Stratum VB	6673	Field I	Earring	Copper alloy
111	IrA I	Stratum VC	6794	Field IV	Spiral – hair ornament	Copper alloy
112	IrA I	Stratum VC	5560	Field IV	Earring	Gold
113	IrA I	Stratum VC	5565	Field IV	Earring	Copper alloy
114	IrA I	Stratum VC	6090	Field IV	Earring	Copper alloy
115	IrA I	Stratum V	1482	Field III	Ring	Gold
116	IrA I	Stratum V	530	Field I	Earring	Copper alloy
117	IrA I	Stratum IVA	4360	Field III	Ring	Copper alloy
118	IrA IIA	Stratum IVA–B	3716	Field III	Bangle	Iron
119	IrA IIA	Stratum IVA–B	1365	Field IV	Bead	Gold
120	IrA IIA	Stratum IV	5580	Field III	Earring	Copper alloy
121	IrA IIA	Stratum IV	1635	Field III	Ring	Copper alloy
122	IrA IIA	Stratum IV	4312	Field III	Earring	Copper alloy

GATH

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
17	LBA–IrA I	Stratum A7	1320310	Area A	Earring	Gold
18	LBA–IrA I	Stratum A7	1320317	Area A	Bead	Silver
19	LBA–IrA I	Stratum A7	1320486	Area A	Bead	Gold
20	IrA I–IIA	Stratum A7	1112139	Area A	Pendant	Electrum
21	IrA I–IIA	Tomb 1	990233a	Area T	Bangle	Iron
22	IrA I–IIA	Tomb 1	990003	Area T	Bangle	Iron
23	IrA I–IIA	Tomb 1	990010	Area T	Bangle	Iron
24	IrA I–IIA	Tomb 1	990233b	Area T	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
25	IrA I–IIA	Tomb 1	990017	Area T	Bangle	Copper alloy
26	IrA I–IIA	Tomb 1	990023	Area T	Bangle	Copper alloy
27	IrA I–IIA	Tomb 1	990024	Area T	Earring	Copper alloy
28	IrA I–IIA	Tomb 1	990027	Area T	Bangle	Iron
29	IrA I–IIA	Tomb 1	990028	Area T	Bangle	Iron
30	IrA I–IIA	Tomb 1	990029	Area T	Bangle	Copper alloy
31	IrA I–IIA	Tomb 1	990035	Area T	Bangle	Copper alloy
32	IrA I–IIA	Tomb 1	990036	Area T	Bangle	Copper alloy
33	IrA I–IIA	Tomb 1	990043	Area T	Bangle	Iron
34	IrA I–IIA	Tomb 1	990046	Area T	Bangle	Iron
35	IrA I–IIA	Tomb 1	990048	Area T	Bangle	Iron
36	IrA I–IIA	Tomb 1	990261c	Area T	Bangle	Iron
37	IrA I–IIA	Tomb 1	990050	Area T	Bangle	Iron
38	IrA I–IIA	Tomb 1	990054	Area T	Ring	Copper alloy
39	IrA I–IIA	Tomb 1	990068	Area T	Bangle	Iron
40	IrA I–IIA	Tomb 1	990206b	Area T	Bangle	Copper alloy
41	IrA I–IIA	Tomb 1	990073	Area T	Bangle	Copper alloy
42	IrA I–IIA	Tomb 1	990085	Area T	Bangle	Copper alloy
43	IrA I–IIA	Tomb 1	990094	Area T	Bangle	Iron
44	IrA I–IIA	Tomb 1	990261b	Area T	Bangle	Iron
45	IrA I–IIA	Tomb 1	990104	Area T	Bangle	Copper alloy
46	IrA I–IIA	Tomb 1	990108	Area T	Bangle	Iron
47	IrA I–IIA	Tomb 1	990261a	Area T	Bangle	Copper alloy
48	IrA I–IIA	Tomb 1	990113	Area T	Fibula	Silver
49	IrA I–IIA	Tomb 1	990114	Area T	Bangle	Copper alloy
50	IrA I–IIA	Tomb 1	990123	Area T	Bangle	Iron
51	IrA I–IIA	Tomb 1	990206a	Area T	Bangle	Copper alloy
52	IrA I–IIA	Tomb 1	990148	Area T	Fibula	Copper alloy
53	IrA I–IIA	Tomb 1	990151	Area T	Bangle	Iron
54	IrA I–IIA	Tomb 1	990159	Area T	Bangle	Copper alloy
55	IrA I–IIA	Tomb 1	990175	Area T	Bangle	Iron
56	IrA I–IIA	Tomb 1	990188	Area T	Bangle	Iron
57	IrA I–IIA	Tomb 1	990233c	Area T	Bangle	Copper alloy
58	IrA I–IIA	Tomb 1	990211	Area T	Earring	Copper alloy
59	IrA I–IIA	Tomb 1	990229	Area T	Bangle	Iron
60	IrA I–IIA	Tomb 1	990232	Area T	Ring	Iron
61	IrA I–IIA	Tomb 1	990260	Area T	Bangle	Copper alloy
62	IrA I–IIA	Tomb 1	990263	Area T	Bangle	Iron
63	IrA I–IIA	Tomb 1	990258b	Area T	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
64	IrA I–IIA	Tomb 1	990019a	Area T	Bangle	Iron
65	IrA I–IIA	Tomb 1	990019b	Area T	Bangle	Copper alloy
66	IrA I–IIA	Tomb 1	990026a	Area T	Bangle	Iron
67	IrA I–IIA	Tomb 1	990026b	Area T	Bangle	Copper alloy
68	IrA I–IIA	Tomb 1	990052a	Area T	Bangle	Copper alloy
69	IrA I–IIA	Tomb 1	990052b	Area T	Bangle	Iron
70	IrA I–IIA	Tomb 1	990074a	Area T	Bangle	Copper alloy
71	IrA I–IIA	Tomb 1	990074b	Area T	Bangle	Iron
72	IrA I–IIA	Tomb 1	990090a	Area T	Bangle	Copper alloy
73	IrA I–IIA	Tomb 1	990090b	Area T	Bangle	Iron
74	IrA I–IIA	Tomb 1	990093a	Area T	Bangle	Iron
75	IrA I–IIA	Tomb 1	990093b	Area T	Bangle	Copper alloy
76	IrA I–IIA	Tomb 1	990093c	Area T	Earring	Copper alloy
77	IrA I–IIA	Tomb 1	990250b	Area T	Bangle	Iron
78	IrA I–IIA	Tomb 1	990119a	Area T	Bangle	Copper alloy
79	IrA I–IIA	Tomb 1	990119b	Area T	Bangle	Iron
80	IrA I–IIA	Tomb 1	990119c	Area T	Bangle	Copper alloy
81	IrA I–IIA	Tomb 1	990130a	Area T	Bangle	Iron
82	IrA I–IIA	Tomb 1	990130b	Area T	Ring	Iron
83	IrA I–IIA	Tomb 1	990130c	Area T	Bangle	Copper alloy
84	IrA I–IIA	Tomb 1	990150a	Area T	Bangle	Copper alloy
85	IrA I–IIA	Tomb 1	990150b	Area T	Bangle	Copper alloy
86	IrA I–IIA	Tomb 1	990250a	Area T	Bangle	Copper alloy
87	IrA I–IIA	Tomb 1	990156a	Area T	Bangle	Copper alloy
88	IrA I–IIA	Tomb 1	990156b	Area T	Bangle	Iron
89	IrA I–IIA	Tomb 1	990165a	Area T	Bangle	Copper alloy
90	IrA I–IIA	Tomb 1	990165b	Area T	Bangle	Copper alloy
91	IrA I–IIA	Tomb 1	990168a	Area T	Bangle	Copper alloy
92	IrA I–IIA	Tomb 1	990168b	Area T	Bangle	Iron

QASILE

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
127	IrA I	Favissa of Stratum XI	2236	Area C	Earring (2)	Gold
128	IrA I	Stratum X	1981	Area C, Temple 131	Bangle	Iron
129	IrA I	Unknown (not Area C)		Unknown	Fibula	Copper alloy
130	IrA I	Unknown	2732	Area C	Earring	Copper alloy

CISJORDAN

Beth Shean

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
131	IrA I	Stratum S-4	888336/2	Hoard 1, Area S	Earring	Gold
132	IrA I	Stratum S-4	888337/3	Hoard 1, Area S	Earring	Silver
133	IrA I	Stratum S-4	888337/4	Hoard 1, Area S	Earring	Silver
134	IrA I	Stratum S-4	888337/6	Hoard 1, Area S	Bangle	Silver
135	IrA I	Stratum S-4	888337/7	Hoard 1, Area S	Pin	Silver
136	IrA I	Stratum S-4	888337/8	Hoard 1, Area S	Earring	Silver
137	IrA I	Stratum S-4	888337/9	Hoard 1, Area S	Earring	Silver
138	IrA I	Stratum S-4	888337/11	Hoard 1, Area S	Earring	Silver
139	IrA I	Stratum S-4	888337/12	Hoard 1, Area S	Ring	Silver
140	IrA I	Stratum S-4	888337/19	Hoard 2, Area S	Earring	Silver
141	IrA I	Stratum S-4	888337/21	Hoard 2, Area S	Earring	Silver
142	IrA I	Stratum S-4	888336/1	Hoard, Area S	Earring	Gold
143	IrA I	Stratum S-4	888337/2	Hoard, Area S	Earring	Silver
144	IrA I	Stratum S-4	888335	Hoard, Area S	Ring	Silver
145	IrA I	Stratum V	29.3	Southern Temple	Ring	Silver
146	IrA I	Stratum V	29.4	Southern Temple	Ring	Silver
147	IrA I	Stratum V	30.32i	Southern Temple	Earring	Gold
148	IrA I	Stratum V	30.32iii	Southern Temple	Earring	Gold
149	IrA I	Stratum V	30.55	Southern Temple	Fibula	Copper alloy
150	IrA I	Stratum V	33.50	Southern Temple	Bead	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
151	IrA I	Stratum V	30.32ii	Southern Temple	Earring	Gold
152	IrA I	Stratum V	29.22	Southern Temple	Earring	Silver
153	IrA I	Stratum V	30.23	Southern Temple	Bangle (4)	Copper alloy
154	IrA I	Stratum V	30.25	Southern Temple	Bangle	Copper alloy
155	IrA I	Stratum V	30.36	Southern Temple	Earring	Gold
156	IrA I	Stratum V	30.37	Southern Temple	Pendant	Copper alloy
157	IrA I	Stratum V	29.21	Southern Temple	Bead	Silver
158	IrA I	Stratum V	33.48	Southern Temple	Bead	Gold
159	IrA I	Stratum V	29.37	Hoard A, Southern Temple	Bangle	Silver
160	IrA I	Stratum V	29.24	Hoard B, Southern Temple	Earring (2)	Silver
161	IrA I	Stratum V	29.25	Hoard B, Southern Temple	Ring	Silver
162	IrA I	Stratum V	29.25ii	Hoard B, Southern Temple	Earring	Silver
163	IrA I	Stratum V	29.32	Hoard A, Southern Temple	Bead	Silver
164	IrA I	Stratum V	29.41	Hoard A, Southern Temple	Bangle	Silver
165	IrA I	Stratum V	29.34	Hoard A, Southern Temple	Earring	Silver
166	IrA I	Stratum V	29.12	Hoard B, Southern Temple	Ring	Silver
167	IrA I	Stratum V	29.23	Hoard B, Southern Temple	Earring	Silver

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
168	IrA I	Stratum VI	34.11	Hoard C, North of Southern Temple	Earring	Gold
169	IrA I	Stratum VI	34.17	Hoard C, North of Southern Temple	Bangle	Gold
170	IrA I	Stratum V	34.8	Southern Temple	Fibula	Copper alloy
171	IrA I	Stratum V	34.9	Southern Temple	Fibula	Copper alloy
172	IrA I	Stratum S-4	987084	S	Earring	Gold
173	IrA I	Stratum S-4	108141	S	Ring	Copper alloy
174	IrA I	Stratum S-3a	288283	S	Pin	Copper alloy
175	IrA I	Stratum S-3a	788174	S	Earring	Gold
176	IrA I	Stratum S-3a	188058	S	Earring	Copper alloy
177	IrA I	Stratum S-3a	788084	S	Ring	Gold
178	IrA I	Stratum S-3a	288258	S	Ring	Copper alloy
179	IrA I	Stratum S-3a?	787240	S	Ring	Copper alloy
180	IrA I	Stratum S-3b	187091	S	Earring	Copper alloy (bronze)
181	IrA I	Stratum S-3b	107222	S	Earring	Gold
182	IrA I	Stratum S-3b	288145	S	Ring	Copper alloy (bronze)
183	IrA I	Stratum S-2	787112	S	Ring	Copper alloy
184	IrA I	Stratum S-2	787323	S	Pendant	Gold
185	IrA I	Tomb 66	1455a	B2	Bead (2)	Gold
186	IrA I	Tomb 66	1358b	B2	Bead	Copper alloy
187	IrA I	Tomb 66	1630A	B2	Bangle	Copper alloy
188	IrA I	Tomb 66	1630B	B2	Bangle	Copper alloy
189	IrA I	Tomb 66	1456	B2	Bangle	Copper alloy
190	IrA I	Tomb 66	1615	B2	Ring	Copper alloy
191	IrA I	Tomb 66	1457	B2	Ring (5)	Copper alloy
192	IrA I	Tomb 66	1359	B2	Ring	Copper alloy
193	IrA I	Tomb 66	1398	B2	Ring	Copper alloy
194	IrA I	Tomb 66	1399	B2	Ring	Copper alloy
195	IrA I	Tomb 66	NFN	B2	Earring	Copper alloy
196	IrA I	Tomb 60	1588	B1	Bead	Gold
197	IrA I	Tomb 60	1787	B1	Bangle (2)	Copper alloy
198	LBA–IrA I	Tomb 202	26-9-327	C2	Mouthpiece	Gold
199	LBA–IrA I	Tomb 202	1723	C2	Ring	Copper alloy

BETH SHEMESH

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
200	LBA–IrA I	Stratum IV, Jug I.5913	I.5937.1	Hoard, Square W of X.27	Earring	Gold
201	LBA–IrA I	Stratum IV, Jug I.5913	I.5937.2	Hoard, Square W of X.27	Earring	Gold
202	LBA–IrA I	Stratum IV, Jug I.5913	I.5937.3	Hoard, Square W of X.27	Earring	Gold
203	IrA I	Tomb I	N. No.	Northwest necropolis	Bangle (18)	Copper alloy
204	IrA I	Tomb I	N. No.	Northwest necropolis	Bangle (10)	Copper alloy
205	IrA I	Tomb I	N. No.	Northwest necropolis	Bangle	Copper alloy
206	IrA I	Tomb I	N. No.	Northwest necropolis	Bangle	Iron
207	IrA I	Tomb I	N. No.	Northwest necropolis	Fibula (2)	Copper alloy
208	IrA I	Tomb I	N. No.	Northwest necropolis	Fibula	Copper alloy

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INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
209	IrA I	Tomb C1	7/7	Area C	Earring	Copper alloy
210	IrA I	Tomb C1	12/15a	Area C	Earring	Copper alloy
211	IrA I	Tomb C1	12/22	Area C	Bangle	Iron
212	IrA I	Tomb C1	12/23	Area C	Bangle	Copper alloy
213	IrA I	Tomb C1	6/19	Area C	Bangle	Copper alloy
214	IrA I	Tomb C1	12/15b	Area C	Bangle	Copper alloy
215	IrA I	Tomb C1	18/23a	Area C	Ring	Copper alloy
216	IrA I	Tomb C1	18/22	Area C	Bangle	Copper alloy
217	IrA I	Tomb C1	18/23b	Area C	Bangle	Copper alloy
218	IrA I	Tomb C1	5/13	Area C	Ring	Copper alloy
219	IrA I	Tomb C1	17/45	Area C	Ring	Copper alloy
220	IrA I	Tomb C1	13/42	Area C	Bangle	Copper alloy
221	IrA I	Tomb C1	17/47	Area C	Bangle	Copper alloy
222	IrA I	Tomb C1	13/44	Area C	Bangle	Iron
223	IrA I	Tomb C1	17/41	Area C	Pin	Copper alloy
224	IrA I	Tomb C1	14/13	Area C	Ring	Copper alloy
225	IrA I	Tomb C1	13/47	Area C	Bangle	Iron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
226	IrA I	Tomb C1	13/49	Area C	Bangle	Iron
227	IrA I	Tomb C1	17/42b	Area C	Bangle	Copper alloy (bronze)
228	IrA I	Tomb C1	17/42a	Area C	Bangle (2)	Copper alloy
229	IrA I	Tomb C1	7/5 69-1122	Area C	Earring	Copper alloy
230	IrA I	Tomb C1	18/22a	Area C	Earring	Silver
231	IrA I	Tomb C1	N. No.	Area C	Bangle	Iron
232	IrA I	Tomb C1	3120	Area C	Bangle	Copper alloy
233	IrA I	Tomb C1	N. No.	Area C	Bangle	Copper alloy
234	IrA I	Tomb C1	17/48	Area C	Bead	Copper alloy
235	IrA I	Tomb C1	13/43	Area C	Bangle	Copper alloy (bronze)
236	IrA I	Tomb C1	18/25	Area C	Bangle	Copper alloy (bronze)
237	IrA I	Tomb C1	17/44	Area C	Bangle	Copper alloy

Far‘ah

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
238b	LBA–IrA I	Unknown	F1027	Unknown	Ring	Silver
238c	LBA–IrA I	Unknown	F1027	Unknown	Ring (12)	Silver
238d	LBA–IrA I	Unknown	F1027	Unknown	Ring	Gold
238e	LBA–IrA I	Tomb 642	642/S2a	Cemetery 600	Earring	Silver
238a	LBA–IrA I	Unknown	N. No.	Unknown	Earring	Copper alloy
239	LBA–IrA I	Tomb 642	642/S2b	Cemetery 600	Earring	Copper alloy
240	LBA–IrA I	Tomb 902	902/S28	Cemetery 900	Ring	Copper alloy
241	LBA–IrA I	Tomb 902	902/S29	Cemetery 900	Ring	Copper alloy
242	LBA–IrA I	Tomb 902	902/S30	Cemetery 900	Earring	Copper alloy
243	LBA–IrA I	Tomb 902	902/S38	Cemetery 900	Pin	Copper alloy
244	LBA–IrA I	Tomb 903	903/S2	Cemetery 900	Earring	Silver
245a	LBA–IrA I	Tomb 906	906/S1	Cemetery 900	Bangle	Copper alloy
245b	LBA–IrA I	Tomb 906	906/S1	Cemetery 900	Bangle	Copper alloy
246	LBA–IrA I	Tomb 919	919/S1	Cemetery 900	Bangle	Copper alloy
247	LBA–IrA I	Tomb 919	919/S3	Cemetery 900	Earring	Copper alloy
248	LBA–IrA I	Tomb 934	934/S91	Cemetery 900	Ring	Gold
249	LBA–IrA I	Tomb 934	934/S95	Cemetery 900	Ring	Gold
250	LBA–IrA I	Tomb 934	934/S99	Cemetery 900	Ring	Gold
251	LBA–IrA I	Tomb 934	934/S111	Cemetery 900	Ring	Gold
252	LBA–IrA I	Tomb 934	934/S113	Cemetery 900	Ring	Silver
253	LBA–IrA I	Tomb 934	934/S114	Cemetery 900	Ring	Silver
254	LBA–IrA I	Tomb 934	934/S115	Cemetery 900	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
255	LBA–IrA I	Tomb 934	934/S116	Cemetery 900	Ring	Silver
256	LBA–IrA I	Tomb 934	934/S117	Cemetery 900	Earring	Gold
257	LBA–IrA I	Tomb 934	934/S118	Cemetery 900	Earring	Gold
258	LBA–IrA I	Tomb 934	934/S148	Cemetery 900	Plaque	Gold
259	LBA–IrA I	Tomb 934	934/S119	Cemetery 900	Earring	Gold
260	LBA–IrA I	Tomb 934	934/S120	Cemetery 900	Earring	Copper alloy
261	LBA–IrA I	Tomb 934	934/S121	Cemetery 900	Earring	Silver
262a	LBA–IrA I	Tomb 934	934/S122	Cemetery 900	Earring	Gold
262b	LBA–IrA I	Tomb 934	934/S122	Cemetery 900	Earring	Gold
263	LBA–IrA I	Tomb 934	934/S123	Cemetery 900	Earring	Gold
264	LBA–IrA I	Tomb 934	934/S124	Cemetery 900	Earring (6)	Gold
265	LBA–IrA I	Tomb 934	934/S140	Cemetery 900	Bead	Gold
266	LBA–IrA I	Tomb 934	934/S141	Cemetery 900	Bead	Gold
267	LBA–IrA I	Tomb 934	934/S144	Cemetery 900	Pendant	Gold
268	LBA–IrA I	Tomb 934	934/S146	Cemetery 900	Pin	Silver
269	LBA–IrA I	Tomb 934	934/S147	Cemetery 900	Diadem	Gold
270	LBA–IrA I	Tomb 935	935/S32	Cemetery 900	Ring	Copper alloy
271	LBA–IrA I	Tomb 935	935/S33	Cemetery 900	Ring	Silver
272	LBA–IrA I	Tomb 935	935/S34	Cemetery 900	Earring	Gold
273	LBA–IrA I	Tomb 935	935/S31	Cemetery 900	Bangle	Copper alloy
274	LBA–IrA I	Tomb 935	935/S40	Cemetery 900	Plaque	Gold
275	LBA–IrA I	Tomb 936	936/S4	Cemetery 900	Ring	Gold
276	LBA–IrA I	Tomb 936	936/S59	Cemetery 900	Pin (3)	Copper alloy
277	LBA–IrA I	Tomb 936	936/S35	Cemetery 900	Ring	Copper alloy
278	LBA–IrA I	Tomb 936	936/?	Cemetery 900	Hair spiral	Copper alloy
279	LBA–IrA I	Tomb 936	936/?	Cemetery 900	Ring	Copper alloy
280	LBA–IrA I	Tomb 936	936/S44	Cemetery 900	Earring	Gold
281	LBA–IrA I	Tomb 936	936/S45	Cemetery 900	Earring	Copper alloy
282	LBA–IrA I	Tomb 936	936/S3	Cemetery 900	Ring	Electrum
283	LBA–IrA I	Tomb 936	936/S43	Cemetery 900	Ring (2)	Copper alloy
284	LBA–IrA I	Tomb 941	941/S1	Cemetery 900	Bangle	Copper alloy
285	LBA–IrA I	Tomb 941	941/S2	Cemetery 900	Bangle	Copper alloy
286	IrA I	Tomb 102	102/S2	Cemetery 100	Earring	Copper alloy
287	IrA I	Tomb 103	103/S2	Cemetery 100	Pin	Copper alloy
288	IrA I	Tomb 104	104/S2	Cemetery 100	Bangle	Iron
289	IrA I	Tomb 104	104/S3	Cemetery 100	Bangle	Iron
290	IrA I	Tomb 104	104/S4	Cemetery 100	Bangle	Copper alloy
291	IrA I	Tomb 107	107/S2	Cemetery 100	Earring	Copper alloy
292	IrA I	Tomb 107	108/S1	Cemetery 100	Ring	Copper alloy
293	IrA I	Tomb 112	112/S11	Cemetery 100	Ring	Copper alloy
294	IrA I	Tomb 115	115/S2	Cemetery 100	Earring (10)	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
295	IrA I	Tomb 115	115/S1	Cemetery 100	Bangle	Metal (unident.)
296	IrA I	Tomb 116	116/S1	Cemetery 100	Bangle	Iron
297	IrA I	Tomb 116	116/S2	Cemetery 100	Ring	Copper alloy
298	IrA I	Tomb 116	116/S3	Cemetery 100	Earring	Copper alloy
299	IrA I	Tomb 117	117/S3	Cemetery 100	Earring	Metal (unident.)
300	IrA I	Tomb 117	117/S2	Cemetery 100	Bangle	Iron
301	IrA I	Tomb 119	119/S1	Cemetery 100	Bead (3)	Silver
302	IrA I	Tomb 122	122/S1	Cemetery 100	Ring	Copper alloy
303	IrA I	Tomb 124	124/S1	Cemetery 100	Bangle	Iron
304	IrA I	Tomb 125	125/S2	Cemetery 100	Earring	Silver
305	IrA I	Tomb 126	126/S2	Cemetery 100	Bangle	Copper alloy
306	IrA I	Tomb 126	126/S2	Cemetery 100	Bangle	Copper alloy
307	IrA I	Tomb 126	126/S3	Cemetery 100	Earring	Gold
308	IrA I	Tomb 126	126/S7	Cemetery 100	Bead	Gold
309	IrA I	Tomb 127	127/S2	Cemetery 100	Bangle	Iron
310	IrA I	Tomb 127	127/S3	Cemetery 100	Bangle	Iron
311	IrA I	Tomb 127	127/S4	Cemetery 100	Earring	Copper alloy
312	IrA I	Tomb 128	128/S2	Cemetery 100	Bangle	Iron
313	IrA I	Tomb 129	129/S1	Cemetery 100	Bangle (2)	Iron
314	IrA I	Tomb 134	134/S5	Cemetery 100	Bangle	Iron
315	IrA I	Tomb 134	134/S6	Cemetery 100	Bangle	Iron
316	IrA I	Tomb 134	134/S7	Cemetery 100	Earring (2)	Silver
317	IrA I	Tomb 134	134/S8	Cemetery 100	Earring	Copper alloy
318	IrA I	Tomb 135	135/S3	Cemetery 100	Bangle	Copper alloy
319	IrA I	Tomb 135	135/S4	Cemetery 100	Bangle	Iron
320	IrA I	Tomb 135	135/S5ii	Cemetery 100	Earring	Iron
321	IrA I	Tomb 135	135/S5	Cemetery 100	Earring	Copper alloy
322	IrA I	Tomb 135	135/S6	Cemetery 100	Earring	Gold
323	IrA I	Tomb 137	137/S1	Cemetery 100	Bangle	Iron
324	IrA I	Tomb 137	137/S2	Cemetery 100	Earring (2)	Copper alloy
325	IrA I	Tomb 502	502/S2	Cemetery 500	Earring	Copper alloy
326	IrA I	Tomb 503	503/S3	Cemetery 500	Ring	Copper alloy
327	IrA I	Tomb 505	505/S2	Cemetery 500	Earring	Copper alloy
328	IrA I	Tomb 505	505/S1	Cemetery 500	Bangle	Iron
329	IrA I	Tomb 505	505/S3	Cemetery 500	Earring	Electrum
330	IrA I	Tomb 505	505/S4	Cemetery 500	Earring	Silver
331	IrA I	Tomb 506	506/S3	Cemetery 500	Bangle	Iron
332	IrA I	Tomb 506	506/S4	Cemetery 500	Bangle	Iron
333	IrA I	Tomb 506	506/S5	Cemetery 500	Bangle (2)	Iron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
334	IrA I	Tomb 506	506/S6	Cemetery 500	Bangle (2)	Iron
335	IrA I	Tomb 506	506/S7	Cemetery 500	Bangle	Iron
336	IrA I	Tomb 506	506/S8	Cemetery 500	Ring	Iron
337	IrA I	Tomb 506	506/S9	Cemetery 500	Ring	Iron
338	IrA I	Tomb 506	506/S10	Cemetery 500	Ring	Iron
339	IrA I	Tomb 506	506/S11	Cemetery 500	Earring	Gold
340	IrA I	Tomb 506	506/S12	Cemetery 500	Earring	Copper alloy
341	IrA I	Tomb 509	509/S2	Cemetery 500	Bangle	Iron
342	IrA I	Tomb 509	509/S3	Cemetery 500	Ring	Iron
343	IrA I	Tomb 510	510/S4	Cemetery 500	Bangle	Iron
344	IrA I	Tomb 510	510/S5	Cemetery 500	Bangle (2)	Iron
345	IrA I	Tomb 510	510/S6	Cemetery 500	Earring (2)	Copper alloy
346	IrA I	Tomb 510	510/S7	Cemetery 500	Earring	Copper alloy
347	IrA I	Tomb 511	511/S1	Cemetery 500	Earring	Copper alloy
348	IrA I	Tomb 512	512/S2	Cemetery 500	Bangle (3)	Iron
349	IrA I	Tomb 512	512/S3	Cemetery 500	Ring	Copper alloy
350	IrA I	Tomb 512	512/S4	Cemetery 500	Ring	Copper alloy
351	IrA I	Tomb 513	513/S1	Cemetery 500	Bangle	Copper alloy
352	IrA I	Tomb 514	514/S1	Cemetery 500	Bangle	Iron
353	IrA I	Tomb 514	514/S2	Cemetery 500	Ring	Copper alloy
354	IrA I	Tomb 517	517/S1	Cemetery 500	Bangle (2)	Iron
356	IrA I	Tomb 518	518/S2	Cemetery 500	Ring	Copper alloy
357	IrA I	Tomb 518	518/S4	Cemetery 500	Earring	Gold
358	IrA I	Tomb 518	518/S3	Cemetery 500	Earring	Gold
359	IrA I	Tomb 519	519/S3	Cemetery 500	Bangle	Copper alloy
400	IrA I	Tomb 519	519/S4	Cemetery 500	Bangle	Copper alloy
401	IrA I	Tomb 519	519/S5	Cemetery 500	Earring	Copper alloy
402	IrA I	Tomb 519	519/S2	Cemetery 500	Bangle	Copper alloy
403	IrA I	Tomb 520	520/S1	Cemetery 500	Bangle	Copper alloy
404	IrA I	Tomb 523	523/S1	Cemetery 500	Earring	Copper alloy
405	IrA I	Tomb 523	523/S2	Cemetery 500	Earring	Copper alloy
406	IrA I	Tomb 526	526/S2	Cemetery 500	Ring	Copper alloy
407	IrA I	Tomb 526	526/S3	Cemetery 500	Ring	Copper alloy
408	IrA I	Tomb 526	526/S4	Cemetery 500	Ring	Iron
409	IrA I	Tomb 526	526/S5	Cemetery 500	Earring	Copper alloy
410	IrA I	Tomb 527	527/S1	Cemetery 500	Bangle	Copper alloy
411	IrA I	Tomb 527	527/S2	Cemetery 500	Earring	Copper alloy
412	IrA I	Tomb 527	527/S3	Cemetery 500	Hair spiral	Copper alloy
413	IrA I	Tomb 528	528/S3	Cemetery 500	Ring	Copper alloy
414	IrA I	Tomb 528	528/S4	Cemetery 500	Ring	Iron
415	IrA I	Tomb 529	529/S1	Cemetery 500	Ring	Silver

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
416	IrA I	Tomb 530	530/S1	Cemetery 500	Ring	Copper alloy
417	IrA I	Tomb 530	530/S2	Cemetery 500	Ring	Copper alloy
418	IrA I	Tomb 530	530/S3	Cemetery 500	Ring	Copper alloy
419	IrA I	Tomb 530	530/S4	Cemetery 500	Earring	Copper alloy
420	IrA I	Tomb 530	530/S5	Cemetery 500	Earring	Electrum
421	IrA I	Tomb 532	532/S14	Cemetery 500	Bead	Gold
422	IrA I	Tomb 532	532/S16	Cemetery 500	Bead	Gold
423	IrA I	Tomb 532	532/S5	Cemetery 500	Ring	Silver
424	IrA I	Tomb 532	532/S6	Cemetery 500	Bangle	Iron
425	IrA I	Tomb 532	532/S7	Cemetery 500	Ring	Copper alloy
426	IrA I	Tomb 532	532/S8	Cemetery 500	Ring	Copper alloy
427	IrA I	Tomb 532	532/S9	Cemetery 500	Ring	Copper alloy
428	IrA I	Tomb 532	532/S10	Cemetery 500	Earring	Gold
429	IrA I	Tomb 532	532/S12	Cemetery 500	Bead (17)	Gold
430	IrA I	Tomb 532	532/S11	Cemetery 500	Earring	Gold
431	IrA I	Tomb 532	532/S14	Cemetery 500	Bead (2)	Gold
432	IrA I	Tomb 533	533/S4	Cemetery 500	Bangle	Iron
433	IrA I	Tomb 533	533/S5	Cemetery 500	Ring	Copper alloy
434	IrA I	Tomb 533	533/S6	Cemetery 500	Earring	Copper alloy
435	IrA I	Tomb 533	533/S7	Cemetery 500	Earring	Copper alloy
436	IrA I	Tomb 542	542/S11	Cemetery 500	Ring	Iron
437	IrA I	Tomb 542	542/S10	Cemetery 500	Ring	Copper alloy
438	IrA I	Tomb 542	542/S9	Cemetery 500	Ring	Copper alloy
439	IrA I	Tomb 542	542/S8	Cemetery 500	Bangle	Iron
440	IrA I	Tomb 542	542/S7	Cemetery 500	Bangle	Iron
441	IrA I	Tomb 542	542/S6	Cemetery 500	Bangle	Iron
443	IrA I	Tomb 542	542/S9?	Cemetery 500	Hair spiral	Copper alloy
444	IrA I	Tomb 542	542/S12	Cemetery 500	Earring (3)	Gold
445	IrA I	Tomb 552	552/S10	Cemetery 500	Ring	Silver
446	IrA I	Tomb 552	552/S13	Cemetery 500	Bead	Silver
447	IrA I	Tomb 552	552/S12	Cemetery 500	Bead	Gold
448	IrA I	Tomb 552	552/S4	Cemetery 500	Ring	Electrum
449	IrA I	Tomb 552	552/S6	Cemetery 500	Ring	Gold
450	IrA I	Tomb 552	552/S8	Cemetery 500	Ring	Copper alloy
451	IrA I	Tomb 552	552/S13	Cemetery 500	Bead	Gold
452	IrA I	Tomb 552	552/S9	Cemetery 500	Ring	Copper alloy
453	IrA I	Tomb 562	562/S11	Cemetery 500	Pin	Copper alloy
454	IrA I	Tomb 585	585/S2	Cemetery 500	Bangle	Iron
456	IrA I	Area of Cem. 500	500/S4	Cemetery 500	Bangle	Copper alloy
457	IrA I	Area of Cem. 500	500/S5	Cemetery 500	Bangle	Iron
458	IrA I	Area of Cem. 500	500/S6	Cemetery 500	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
459	IrA I	Area of Cem. 500	500/S7	Cemetery 500	Ring	Copper alloy
460	IrA I	Area of Cem. 500	500/S8	Cemetery 500	Ring	Copper alloy
461	IrA I	Area of Cem. 500	500/S9	Cemetery 500	Bead	Copper alloy
462	IrA I	Area of Cem. 500	501/S2	Cemetery 500	Ring	Copper alloy
463	IrA I	Area of Cem. 500	502/S1	Cemetery 500	Ring	Iron
464	IrA I	Tomb 603	603/S1	Cemetery 600	Bangle	Copper alloy
465	IrA I	Tomb 603	603/S2	Cemetery 600	Bangle	Copper alloy
466	IrA I	Tomb 603	603/S3	Cemetery 600	Ring	Copper alloy
467	IrA I	Tomb 603	603/S4	Cemetery 600	Ring	Copper alloy
468	IrA I	Tomb 604	604/S1	Cemetery 600	Earring (4)	Copper alloy
469	IrA I	Tomb 605	605/S2	Cemetery 600	Earring	Gold
470	IrA I	Tomb 605	605/S1	Cemetery 600	Earring	Gold
471	IrA I	Tomb 605	605/S3	Cemetery 600	Earring (2)	Silver
472	IrA I	Tomb 609	609/S3	Cemetery 600	Bangle	Iron
473	IrA I	Tomb 609	609/S4	Cemetery 600	Bangle (3)	Copper alloy
474	IrA I	Tomb 609	609/S5	Cemetery 600	Earring (2)	Copper alloy
475	IrA I	Tomb 615	615/S4	Cemetery 600	Ring	Iron
476	IrA I	Tomb 615	615/S5	Cemetery 600	Ring	Iron
477	IrA I	Tomb 616	616/S1	Cemetery 600	Bangle	Iron
478	IrA I	Tomb 617	617/S2	Cemetery 600	Bangle	Copper alloy
479	IrA I	Tomb 625	625/S1	Cemetery 600	Bangle	Iron
480	IrA I	Tomb 625	625/S2	Cemetery 600	Bead	Electrum
481	IrA I	Tomb 627	627/S2	Cemetery 600	Bead	Gold
482	IrA I	Tomb 628	628/S3	Cemetery 600	Ring	Copper alloy
483	IrA I	Tomb 628	628/S4	Cemetery 600	Ring	Iron
484	IrA I	Tomb 632	632/S2	Cemetery 600	Bangle	Iron
485	IrA I	Tomb 632	632/S3	Cemetery 600	Ring	Iron
486	IrA I	Tomb 632	632/S4	Cemetery 600	Ring	Iron
487	IrA I	Tomb 632	632/S2	Cemetery 600	Bangle	Iron
488	IrA I	Tomb 632	632/S5	Cemetery 600	Ring	Iron
489	IrA I	Tomb 632	632/S3	Cemetery 600	Ring	Iron
490	IrA I	Tomb 633	633/S1	Cemetery 600	Earring	Copper alloy
491	IrA I	Tomb 636	636/S2	Cemetery 600	Earring (2)	Copper alloy
492	IrA I	Tomb 641	641/S2	Cemetery 600	Earring	Gold
493	IrA I	Tomb 642	642/S1	Cemetery 600	Bangle	Iron
494	IrA I	Tomb 642	642/S2	Cemetery 600	Earring (2)	Copper alloy
495	IrA I	Tomb 645	645/S1	Cemetery 600	Bangle	Iron
496	IrA I	Tomb 645	645/S2	Cemetery 600	Ring	Copper alloy
497	IrA I	Tomb 645	645/S3	Cemetery 600	Ring	Copper alloy
498	IrA I	Tomb 645	645/S4	Cemetery 600	Ring (2)	Copper alloy
499	IrA I	Tomb 645	645/S5	Cemetery 600	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
500	IrA I	Tomb 645	645/S7	Cemetery 600	Pin	Copper alloy
501	IrA I	Tomb 647	647/S1	Cemetery 600	Bangle	Iron
502	IrA I	Tomb 647	647/S2	Cemetery 600	Ring	Iron
503	IrA I	Tomb 647	647/S3	Cemetery 600	Earring	Copper alloy
504	IrA I	Tomb 661	661/S2	Cemetery 600	Bangle	Iron
505	IrA I	Area of Cem. 600	600/S7	Cemetery 600	Bead	Silver
506	IrA I	Area of Cem. 600	600/S8	Cemetery 600	Bead	Silver
507	IrA I	Area of Cem. 600	600/S6	Cemetery 600	Earring	Silver
508	IrA I	Area of Cem. 600	600/S5	Cemetery 600	Earring	Silver
509	IrA I	Area of Cem. 600	600/S14	Cemetery 600	Bead	Copper alloy
510	IrA I	Tomb 803	803/S1	Cemetery 800	Earring	Copper alloy
511	IrA I	Tomb 803	803/S2	Cemetery 800	Pin	Copper alloy
512	IrA I	Tomb 803	803/S3	Cemetery 800	Pin	Copper alloy
513	IrA I	Tomb 809	809/S1	Cemetery 800	Bangle	Copper alloy
514	IrA I	Tomb 809	809/S2	Cemetery 800	Bangle	Copper alloy
515	IrA I	Tomb 810	810/S1	Cemetery 800	Ring (2)	Copper alloy
516	IrA I	Tomb 811	811/S1	Cemetery 800	Bangle (2)	Copper alloy
517	IrA I	Tomb 811	811/S2	Cemetery 800	Earring	Copper alloy
518	IrA I	Tomb 812	812/S1	Cemetery 800	Earring	Copper alloy
519	IrA I	Tomb 813	813/S1	Cemetery 800	Ring	Gold
520a	IrA I	Tomb 813	813/S2	Cemetery 800	Ring	Copper alloy
520b	IrA I	Tomb 839	839/S1	Cemetery 800	Bangle	Iron
521	IrA I	Tomb 814	814/S1	Cemetery 800	Ring	Copper alloy
522	IrA I	Tomb 814	815/S1	Cemetery 800	Bangle	Copper alloy
523	IrA I	Tomb 820	820/S1	Cemetery 800	Ring	Copper alloy
524	IrA I	Tomb 825	825/S1	Cemetery 800	Bead	Electrum
525	IrA I	Tomb 825	825/S1	Cemetery 800	Bead	Gold
526	IrA I	Tomb 832	832/S1	Cemetery 800	Bangle (2)	Copper alloy
527	IrA I	Tomb 832	832/S2	Cemetery 800	Bangle (3)	Copper alloy
528	IrA I	Tomb 837	837/S1	Cemetery 800	Bead	Gold
529	IrA I	Tomb 838	838/S2	Cemetery 800	Earring	Copper alloy
531	IrA I	Tomb 841	841/S1	Cemetery 800	Ring	Iron
532	IrA I	Tomb 841	841/S2	Cemetery 800	Ring	Copper alloy
533	IrA I	Tomb 842	842/S1	Cemetery 800	Ring	Gold
534	IrA I	Tomb 843	843/S2	Cemetery 800	Pin	Copper alloy
535	IrA I	Tomb 843	843/S3	Cemetery 800	Pin	Copper alloy
536	IrA I	Tomb 846	846/S1	Cemetery 800	Bangle	Copper alloy
537	IrA I	Tomb 846	846/S2	Cemetery 800	Ring	Copper alloy
538	IrA I	Tomb 846	846/S3	Cemetery 800	Ring	Iron
539	IrA I	Tomb 846	846/S4	Cemetery 800	Earring	Copper alloy
540	IrA I	Tomb 846	846/S6	Cemetery 800	Bead (24)	Electrum

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
541	IrA I	Tomb 847	847/S1	Cemetery 800	Bangle (3)	Copper alloy
542	IrA I	Tomb 847	847/S2	Cemetery 800	Earring	Copper alloy
543	IrA I	Tomb 859	859/S1	Cemetery 800	Bangle (2)	Iron
544	IrA I	Tomb 859	859/S2	Cemetery 800	Bangle (2)	Iron
545	IrA I	Tomb 859	859/S3	Cemetery 800	Bead	Silver
546	IrA I	Tomb 859	859/S2	Cemetery 800	Bangle (2)	Iron
547	IrA I	Tomb 863	863/S1	Cemetery 800	Bangle	Iron
548	IrA I	Tomb 864	864/S1	Cemetery 800	Earring	Copper alloy
549	IrA I	Area of Cem. 800	800/S6	Cemetery 800	Bangle	Copper alloy
550	IrA I	Area of Cem. 800	800/S7	Cemetery 800	Bangle	Copper alloy
551	IrA I	Area of Cem. 800	800/S8	Cemetery 800	Bangle	Copper alloy
552	IrA I	Area of Cem. 800	800/S9	Cemetery 800	Bangle	Iron
553	IrA I	Area of Cem. 800	800/S10	Cemetery 800	Bangle	Copper alloy
554	IrA I	Area of Cem. 800	800/S11	Cemetery 800	Bangle	Copper alloy
555	IrA I	Area of Cem. 800	800/S12	Cemetery 800	Ring	Copper alloy
556	IrA I	Area of Cem. 800	800/S13	Cemetery 800	Ring	Silver
557	IrA I	Area of Cem. 800	800/S14	Cemetery 800	Ring	Silver
558	IrA I	Area of Cem. 800	800/S16	Cemetery 800	Ring	Copper alloy
559	IrA I	Area of Cem. 800	800/S17	Cemetery 800	Earring	Copper alloy
560	IrA I	Area of Cem. 800	800/S18	Cemetery 800	Earring	Copper alloy
560	IrA I	Area of Cem. 800	800/S18	Cemetery 800	Earring	Copper alloy
561	IrA I	Area of Cem. 800	800/S31	Cemetery 800	Pin	Copper alloy
562	IrA I	Area of Cem. 800	800/S32	Cemetery 800	Pin	Copper alloy
563	IrA I	Area of Cem. 800	800/S15	Cemetery 800	Earring	Copper alloy
564	IrA I	Area of Cem. 800	800/S19	Cemetery 800	Earring (3)	Copper alloy
565	IrA I	Area of Cem. 800	800/S33	Cemetery 800	Pin	Copper alloy
566	IrA I	Tomb 956	956/S1	Cemetery 900	Earring (2)	Silver
567	IrA I	Tomb 960	960/S48	Cemetery 900	Earring	Gold
568	IrA I	Tomb 960	960/S2	Cemetery 900	Ring	Gold
569	IrA I	Tomb 960	960/S47	Cemetery 900	Earring (2)	Silver
570	IrA I	Tomb 960	960/S49	Cemetery 900	Earring	Gold
571	IrA I	Tomb 960	960/S50	Cemetery 900	Earring	Gold
572	IrA I	Tomb 960	960/S5	Cemetery 900	Ring	Gold
573	IrA I	Tomb 984	984/S41	Cemetery 900	Bangle (2)	Copper alloy
574	IrA I	Tomb 984	984/S42	Cemetery 900	Earring (2)	Copper alloy
575	IrA I–IIA	Tomb 131	131/S2	Cemetery 100	Ring	Iron
576	IrA I–IIA	Tomb 131	131/S3	Cemetery 100	Earring	Copper alloy
577	IrA I–IIA	Tomb 132	132/S1	Cemetery 100	Bangle	Copper alloy
578	IrA I–IIA	Tomb 132	132/S2	Cemetery 100	Bangle	Copper alloy
579	IrA I–IIA	Tomb 133	133/S4	Cemetery 100	Bangle	Copper alloy
580	IrA I–IIA	Tomb 133	133/S5	Cemetery 100	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
581	IrA I–IIA	Tomb 133	133/S6	Cemetery 100	Bangle	Copper alloy
582	IrA I–IIA	Tomb 133	133/S7	Cemetery 100	Earring (2)	Metal (unident.)
585	IrA I–IIA	Tomb 204	204.175	Cemetery 200	Bangle	Iron
586	IrA I–IIA	Tomb 204	204.176	Cemetery 200	Earring	Gold
587	IrA I–IIA	Tomb 205	205/?	Cemetery 200	Bead (13)	Gold
588	IrA I–IIA	Tomb 205	205/?	Cemetery 200	Bead (2)	Gold
589	IrA I–IIA	Tomb 206	206/?	Cemetery 200	Bead	Gold
590	IrA I–IIA	Tomb 211	211.177	Cemetery 200	Ring	Copper alloy
591	IrA I–IIA	Tomb 220	220.390	Cemetery 200	Earring	Gold
592	IrA I–IIA	Tomb 220	220/?	Cemetery 200	Ring	Gold
593	IrA I–IIA	Tomb 220	220.186	Cemetery 200	Ring	Copper alloy
594	IrA I–IIA	Tomb 220	220.390ii	Cemetery 200	Earring	Copper alloy
595	IrA I–IIA	Tomb 220	220.390iii	Cemetery 200	Earring	Electrum
596	IrA I–IIA	Tomb 220	220/?	Cemetery 200	Bead	Gold
597	IrA I–IIA	Tomb 220	220.187	Cemetery 200	Bangle	Copper alloy
598	IrA I–IIA	Tomb 220	220.185	Cemetery 200	Bangle	Iron
599	IrA I–IIA	Tomb 220	220.390iv	Cemetery 200	Earring	Gold
600	IrA I–IIA	Tomb 821	821/S2	Cemetery 800	Pendant	Copper alloy
601	IrA I–IIA	Tomb 853	853/S1	Cemetery 800	Bangle	Copper alloy
602	IrA I–IIA	Tomb 853	853/S2	Cemetery 800	Bangle	Copper alloy
603	IrA I–IIA	Tomb 853	853/S3	Cemetery 800	Bangle	Iron
604	IrA I–IIA	Tomb 853	853/S4	Cemetery 800	Bangle	Copper alloy
605	IrA I–IIA	Tomb 853	853/S7	Cemetery 800	Bead	Gold
606	IrA I–IIA	Tomb 853	853/S7	Cemetery 800	Bead	Gold
607	IrA IIA	Tomb 201	201.277	Cemetery 200	Earring	Copper alloy
608	IrA IIA	Tomb 201	201.275	Cemetery 200	Earring	Silver
609	IrA IIA	Tomb 201	201.281	Cemetery 200	Bangle	Iron
610	IrA IIA	Tomb 201	201.251	Cemetery 200	Bangle	Iron
611	IrA IIA	Tomb 201	201/?	Cemetery 200	Bead	Gold
612	IrA IIA	Tomb 201	201.500	Cemetery 200	Diadem	Gold
613	IrA IIA	Tomb 201	201.449	Cemetery 200	Diadem	Gold
614	IrA IIA	Tomb 201	201.246	Cemetery 200	Bangle	Iron
615	IrA IIA	Tomb 201	201.248	Cemetery 200	Bangle	Copper alloy
616	IrA IIA	Tomb 201	201.247	Cemetery 200	Earring	Silver
617	IrA IIA	Tomb 201	201.265	Cemetery 200	Earring	Silver
618	IrA IIA	Tomb 201	201.271	Cemetery 200	Earring (2)	Silver
619	IrA IIA	Tomb 201	201.250	Cemetery 200	Bangle	Iron
620	IrA IIA	Tomb 201	201.252	Cemetery 200	Bangle	Copper alloy
621	IrA IIA	Tomb 201	201.253	Cemetery 200	Ring	Silver
622	IrA IIA	Tomb 201	201.254	Cemetery 200	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
623	IrA IIA	Tomb 201	201.255	Cemetery 200	Ring	Copper alloy
624	IrA IIA	Tomb 201	201.284	Cemetery 200	Bangle	Iron
625	IrA IIA	Tomb 201	201.286	Cemetery 200	Ring	Silver
626	IrA IIA	Tomb 201	201.280	Cemetery 200	Earring	Copper alloy
627	IrA IIA	Tomb 201	201.285	Cemetery 200	Bangle	Iron
628	IrA IIA	Tomb 201	201.288	Cemetery 200	Ring	Iron
629	IrA IIA	Tomb 201	201.276	Cemetery 200	Earring	Copper alloy
630	IrA IIA	Tomb 201	201.283	Cemetery 200	Bangle	Iron
631	IrA IIA	Tomb 201	201.279	Cemetery 200	Earring	Copper alloy
632	IrA IIA	Tomb 201	201.249	Cemetery 200	Ring	Iron
633	IrA IIA	Tomb 202	202.298	Cemetery 200	Earring	Copper alloy
634	IrA IIA	Tomb 202	202.308	Cemetery 200	Ring	Silver
635	IrA IIA	Tomb 202	202/?	Cemetery 200	Bead	Gold
636	IrA IIA	Tomb 202	202.307	Cemetery 200	Ring	Copper alloy
637	IrA IIA	Tomb 202	202.309	Cemetery 200	Earring	Silver
638	IrA IIA	Tomb 202	202.311	Cemetery 200	Earring	Electrum
639	IrA IIA	Tomb 202	202.309ii	Cemetery 200	Earring	Copper alloy
640	IrA IIA	Tomb 202	202.310	Cemetery 200	Earring	Gold
641	IrA IIA	Tomb 212	212.333	Cemetery 200	Earring	Copper alloy
642	IrA IIA	Tomb 212	212.332	Cemetery 200	Earring	Gold
643	IrA IIA	Tomb 212	212/?	Cemetery 200	Bead	Copper alloy
644	IrA IIA	Tomb 212	212.325	Cemetery 200	Earring	Metal (unident.)
645	IrA IIA	Tomb 212	212.324	Cemetery 200	Bangle	Metal (unident.)
646	IrA IIA	Tomb 212	212.330	Cemetery 200	Ring	Iron
647	IrA IIA	Tomb 212	212.331	Cemetery 200	Ring	Silver
648	IrA IIA	Tomb 212	212.334	Cemetery 200	Earring	Metal (unident.)
649	IrA IIA	Tomb 213	213.434	Cemetery 200	Earring	Silver
650	IrA IIA	Tomb 213	213.421	Cemetery 200	Earring	Copper alloy
651	IrA IIA	Tomb 213	213.432	Cemetery 200	Earring	Silver
652	IrA IIA	Tomb 213	213.428	Cemetery 200	Bangle	Iron
653	IrA IIA	Tomb 213	213.429	Cemetery 200	Bangle	Copper alloy
654	IrA IIA	Tomb 213	213.433	Cemetery 200	Earring	Copper alloy
655	IrA IIA	Tomb 213	213.430	Cemetery 200	Bangle	Copper alloy
656	IrA IIA	Tomb 213	213.422	Cemetery 200	Earring (2)	Copper alloy
657	IrA IIA	Tomb 221	221.296	Cemetery 200	Earring	Silver
658	IrA IIA	Tomb 221	221.295	Cemetery 200	Fibula	Copper alloy
659	IrA IIA	Tomb 221	221.293	Cemetery 200	Bangle	Copper alloy
660	IrA IIA	Tomb 221	221.294	Cemetery 200	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
661	IrA IIA	Tomb 222	222.168	Cemetery 200	Bangle	Copper alloy
672	IrA IIA	Tomb 222	222.367	Cemetery 200	Earring (2)	Gold
673	IrA IIA	Tomb 222	222.367iii	Cemetery 200	Earring	Electrum
674	IrA IIA	Tomb 222	222.169	Cemetery 200	Ring (2)	Copper alloy
675	IrA IIA	Tomb 222	222.368	Cemetery 200	Earring	Gold
676	IrA IIA	Tomb 222	222.367ii	Cemetery 200	Earring	Silver
677	IrA IIA	Tomb 223	223.329	Cemetery 200	Earring (2)	Gold
678	IrA IIA	Tomb 223	223.329ii	Cemetery 200	Ring	Copper alloy
679	IrA IIA	Tomb 223	223.327	Cemetery 200	Bangle	Iron
680	IrA IIA	Tomb 223	223.328	Cemetery 200	Pendant	Silver
681	IrA IIA	Tomb 223	223.526	Cemetery 200	Earring	Copper alloy
682	IrA IIA	Tomb 224	224.340	Cemetery 200	Earring	Copper alloy
683	IrA IIA	Tomb 224	224.339	Cemetery 200	Bangle	Copper alloy
684	IrA IIA	Tomb 227	227.134	Cemetery 200	Earring	Silver
685	IrA IIA	Tomb 228	228.431	Cemetery 200	Bangle	Copper alloy
686	IrA IIA	Tomb 229	229.449	Cemetery 200	Bangle	Copper alloy
687	IrA IIA	Tomb 229	229.456	Cemetery 200	Pendant	Gold
688	IrA IIA	Tomb 229	229.445-6	Cemetery 200	Earring (2)	Silver
689	IrA IIA	Tomb 229	229.452	Cemetery 200	Pendant	Gold
690	IrA IIA	Tomb 229	229.448	Cemetery 200	Bangle	Copper alloy
691	IrA IIA	Tomb 229	229.450	Cemetery 200	Bangle	Iron
692	IrA IIA	Tomb 229	229.451	Cemetery 200	Bangle	Iron
693	IrA IIA	Tomb 231	231.517	Cemetery 200	Earring	Electrum
694	IrA IIA	Tomb 231	231/?	Cemetery 200	Bead	Gold
695	IrA IIA	Tomb 231	231/?	Cemetery 200	Bead	Gold
696	IrA IIA	Tomb 233	233.155	Cemetery 200	Bangle	Copper alloy
697	IrA IIA	Tomb 237	237.173	Cemetery 200	Bangle	Iron
698	IrA IIA	Tomb 238	238.299	Cemetery 200	Bangle	Iron
699	IrA IIA	Tomb 238	238.297	Cemetery 200	Earring	Silver
700	IrA IIA	Tomb 238	238.298	Cemetery 200	Earring	Copper alloy
701	IrA IIA	Tomb 239	239.125	Cemetery 200	Earring	Silver
702	IrA IIA	Tomb 239	239.120	Cemetery 200	Diadem	Gold
703	IrA IIA	Tomb 240	240/?	Cemetery 200	Bead	Gold
704	IrA IIA	Tomb 240	240.227	Cemetery 200	Earring	Gold
705	IrA IIA	Tomb 240	240.218	Cemetery 200	Bangle	Copper alloy
706	IrA IIA	Tomb 240	240.219	Cemetery 200	Ring	Gold
707	IrA IIA	Tomb 240	240.241	Cemetery 200	Ring	Copper alloy
708	IrA IIA	Tomb 240	240.242	Cemetery 200	Earring	Copper alloy
709	IrA IIA	Tomb 240	240.244	Cemetery 200	Earring	Copper alloy
710	IrA IIA	Tomb 240	240.245	Cemetery 200	Ring	Copper alloy
711	IrA IIA	Tomb 240	240.225	Cemetery 200	Earring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
712	IrA IIA	Tomb 241	241.514	Cemetery 200	Earring	Gold
713	IrA IIA	Tomb 241	241/?	Cemetery 200	Bead (13)	Gold
714	IrA IIA	Tomb 241	241/?	Cemetery 200	Bead	Gold
715	IrA IIA	Tomb 241	241/?	Cemetery 200	Bead	Gold
716	IrA IIA	Tomb 241	241.316	Cemetery 200	Ring	Iron
717	IrA IIA	Tomb 241	241.314	Cemetery 200	Bangle	Copper alloy
718	IrA IIA	Tomb 241	241.313	Cemetery 200	Bangle	Copper alloy
719	IrA IIA	Tomb 241	241.317	Cemetery 200	Bangle	Copper alloy
720	IrA IIA	Tomb 241	241.315	Cemetery 200	Earring	Metal (unident.)
721	IrA IIA	Tomb 522	522/S1	Cemetery 500	Bangle	Copper alloy
722	IrA IIA	Tomb 522	522/S2	Cemetery 500	Ring	Copper alloy
723	IrA IIA	Tomb 534	534/S12	Cemetery 500	Earring	Copper alloy
724	IrA IIA	Tomb 534	534/S14	Cemetery 500	Earring	Copper alloy
726	IrA IIA	Tomb 534	534/S10	Cemetery 500	Earring	Copper alloy
727	IrA IIA	Tomb 534	534/S11	Cemetery 500	Earring	Copper alloy
728	IrA IIA	Tomb 534	534/S13	Cemetery 500	Earring	Copper alloy
729	IrA IIA	Tomb 540	540/S1	Cemetery 500	Bangle	Copper alloy
730	IrA IIA	Tomb 540	540/S2	Cemetery 500	Earring	Copper alloy
731	IrA IIA	Tomb 546	546/S1	Cemetery 500	Bangle	Copper alloy
732	IrA IIA	Tomb 546	546/S2	Cemetery 500	Bangle	Copper alloy
733	IrA IIA	Tomb 546	546/S3	Cemetery 500	Bangle	Copper alloy
734	IrA IIA	Tomb 546	546/S5	Cemetery 500	Ring	Copper alloy
735	IrA IIA	Tomb 546	546/S4	Cemetery 500	Bangle	Copper alloy
736	IrA IIA	Tomb 546	546/S6	Cemetery 500	Ring	Iron

MEGIDDO

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
770	LBA	Stratum VIIB	a669	Area BB	Pendant (2)	Silver
771	LBA	Stratum VIIB	b561	Area AA	Pendant (2)	Copper alloy
772	LBA/IrA I	Stratum VIIA	b 1195	Area AA	Earring	Gold
773	LBA/IrA I	Stratum VIIA	b1192a-b	Area AA	Pendant (2)	Gold
774	LBA/IrA I	Stratum VIIA	b1187	Area AA	Bead	Gold
775	LBA/IrA I	Stratum VIIA	b1199	Area AA	Bead (7)	Gold
776	LBA/IrA I	Stratum VIIA	b1194	Area AA	Pendant	Gold
777	LBA/IrA I	Stratum VIIA	b1198	Area AA	Bead (5)	Gold
778	LBA/IrA I	Stratum VIIA	b1188a-c	Area AA	Bead (3)	Gold
779	LBA/IrA I	Stratum VIIA	b1200	Area AA	Bead (38)	Gold
780	LBA/IrA I	Stratum VIIA	b1190	Area AA	Pendant	Gold
781	LBA/IrA I	Stratum VIIA	b1189	Area AA	Pendant	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
782	LBA/IrA I	Stratum VIIA	b1193	Area AA	Pendant	Gold
783	LBA/IrA I	Stratum VIIA	M5843	Area CC	Ring	Gold
784	LBA/IrA I	Stratum VIIA	d64	Area DD	Bead	Gold
785	LBA/IrA I	Stratum VIIA	M5898	Area CC	Fibula	Copper alloy
786	LBA/IrA I	Stratum VII, Hoard 1	a233	Area BB	Pendant	Copper alloy (bronze)
787	LBA/IrA I	Stratum VII, Hoard 1	a1122	Area BB	Pendant	Gold
788	LBA/IrA I	Stratum VII, Hoard 1	a1115	Area BB	Pendant	Gold
789	LBA/IrA I	Stratum VII, Hoard 1	a1116	Area BB	Pendant	Gold
790	LBA/IrA I	Stratum VII	a615	Area BB	Earring	Gold
791	LBA/IrA I	Stratum VII	a566	Area BB	Bangle	Copper alloy
792	IrA I	Stratum VIB	d675	Area DD	Ring	Copper alloy
793	IrA I	Stratum VIA, Hoard 2	a133 a-c	Area AA	Earring (6)	Silver
794	IrA I	Stratum VIA	b66	Area AA	Fibula	Copper alloy
795	IrA I	Stratum VIA	a398	Area AA	Ring	Copper alloy
796	IrA I	Stratum VIA	a630	Area AA	Ring	Copper alloy
797	IrA I	Stratum VIA, Hoard 3	d624	Area DD	Bead (6)	Gold
798	IrA I	Stratum VIA, Hoard 3	d624ii	Area DD	Bead (6)	Copper alloy
799	IrA I	Stratum VIA, Hoard 3	d622	Area DD	Bead (3)	Gold
800	IrA I	Stratum VIA, Hoard 3	d623	Area DD	Earring	Gold
801	IrA I	Stratum VIA	00/K/25/AR11	Level K4	Pin	Copper alloy
802	IrA I	Stratum VIA	98/K/42/AR13	Level K4	Pin	Copper alloy
803	IrA I	Stratum VIA	00/K/25/AR11	Level K4	Pin	Copper alloy
804	IrA I	Stratum VI	a460	Area BB	Pin	Copper alloy
805	IrA I	Stratum VI	a462	Area BB	Pin	Copper alloy
806	IrA I	Stratum VI	M5515	Area CC	Bangle	Copper alloy
807	IrA I	Stratum VI	M5746	Area CC	Bangle	Copper alloy
809	IrA I	Stratum VI	M5075	Area CC	Pin	Copper alloy
810	IrA I	Stratum VI	M5747+	Area CC	Pin	Silver
811	IrA I	Stratum VI	M5801	Area CC	Ring (2)	Iron
812	IrA I	Stratum VI	M5604	Area CC	Fibula	Copper alloy
813	IrA I	Stratum VI	M5076	Area CC	Bangle	Copper alloy
814	IrA I	Stratum VI	M5623	Area CC	Pin	Copper alloy
815	IrA I	Tomb 37B, Stratum VI	545	Unknown	Bangle	Iron
816	IrA I	Tomb 37B, Stratum VI	x545	Unknown	Bangle	Copper alloy
817	IrA I	Tomb 37C, Stratum VI	x555	Unknown	Bangle	Copper alloy
818	IrA I	Tomb 37C, Stratum VI	x553	Unknown	Bangle	Copper alloy
819	IrA I	Tomb 37C, Stratum VI	x554	Unknown	Bangle	Copper alloy
820	IrA I	Tomb 37C, Stratum VI	x552	Unknown	Bangle	Copper alloy
821	IrA I	Tomb 39, Stratum VI	x794	Unknown	Plaque	Gold
822	IrA I	Tomb 39, Stratum VI	x647	Unknown	Ring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
823	IrA I	Tomb 39, Stratum VI	x645	Unknown	Ring	Gold
824	IrA I	Tomb 39, Stratum VI	x646	Unknown	Ring	Gold
825	IrA I	Tomb 39, Stratum VI	x722	Unknown	Ring	Gold
826	IrA I	Tomb 39, Stratum VI	x723	Unknown	Ring	Gold
827	IrA I	Tomb 39, Stratum VI	x787	Unknown	Ring	Gold
828	IrA I	Tomb 39, Stratum VI	x786	Unknown	Mouthpiece	Gold
829	IrA I	Tomb 39, Stratum VI	x649	Unknown	Mouthpiece	Gold
830	IrA I	Tomb 39, Stratum VI	x651	Unknown	Mouthpiece	Gold
831	IrA I	Tomb 39, Stratum VI	x790	Unknown	Bead	Gold
832	IrA I	Tomb 39, Stratum VI	x788	Unknown	Ring	Gold
833	IrA I	Tomb 39, Stratum VI	x671	Unknown	Ring	Gold
834	IrA I	Tomb 39, Stratum VI	x791	Unknown	Ring	Gold
835	IrA I	Tomb 39, Stratum VI	x777	Unknown	Ring	Copper alloy
836	IrA I	Tomb 39, Stratum VI	x672	Unknown	Earring	Gold
837	IrA I	Tomb 39, Stratum VI	x648	Unknown	Earring	Gold
838	IrA I	Tomb 39, Stratum VI	x789	Unknown	Pendant (2)	Gold
839	IrA I	Tomb 39, Stratum VI	x727	Unknown	Earring	Silver
840	IrA I	Tomb 39, Stratum VI	x594	Unknown	Pin	Copper alloy
841	IrA I	Tomb 39, Stratum VI	x674	Unknown	Earring	Gold
842	IrA I	Tomb 39, Stratum VI	x650	Unknown	Plaque	Gold
843	IrA I	Tomb 62, Stratum VI	M36	Unknown	Pin	Copper alloy
844	IrA I	Tomb 62, Stratum VI	M22	Unknown	Bead (10)	Gold
845	IrA I	Tomb 62, Stratum VI	M20	Unknown	Mouthpiece	Gold
846	IrA I	Tomb 62, Stratum VI	M21	Unknown	Pin	Gold
847	IrA I	Tomb 62, Stratum VI	M18	Unknown	Pin	Silver
848	IrA I	Tomb 71, Stratum VI	M45	Unknown	Ring	Copper alloy
849	IrA I	Tomb 221B, Stratum VI	M664	Unknown	Bangle	Iron
850	IrA I	Tomb 1768, Stratum VI	M5742	Area CC	Ring	Copper alloy
851	IrA I	Tomb 1778, Stratum VI	M6043	Area CC	Bangle	Iron
852	IrA I	Stratum VB	a59	Unknown	Ring	Copper alloy
853	IrA I	Stratum V	a101	Area AA	Ring	Copper alloy
854	IrA IIA	Stratum VA	a811	Area AA	Ring	Copper alloy
855	IrA IIA	Stratum VA	a813	Area AA	Bangle	Iron
856	IrA IIA	Stratum VA	a1121	Area AA	Pin	Copper alloy
857	IrA IIA	Stratum VA	a806	Area AA	Bangle	Copper alloy
858	IrA IIA	Stratum VA, Hoard 4	a680	Area AA	Fibula	Copper alloy
859	IrA IIA	Stratum VA	a812	Unknown	Earring	Silver
860	IrA IIA	Stratum IV	M5410	Unknown	Bangle	Copper alloy
861	IrA IIA	Stratum IV	M937	Area AA	Bangle	Copper alloy
862	IrA IIA	Stratum IV	M5092	Area DD	Bangle	Copper alloy
863	IrA IIA	Stratum IV	a256	Area AA	Fibula	Copper alloy

NASBEH

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
864	IrA I–IIA	Tomb 32	X640	West Cem. north strip	Earring (2)	Copper alloy
865	IrA I–IIA	Tomb 32	X640	West Cem. north strip	Earring (2)	Copper alloy
866	IrA I–IIA	Tomb 32	X682	West Cem. central strip	Earring (3)	Gold
867	IrA I–IIA	Tomb 32	X679	West Cem. central strip	Earring (3)	Silver
868	IrA I–IIA	Tomb 32	X641	West Cemetery	Earring	Copper alloy
869	IrA I–IIA	Tomb 32	X636	West Cemetery	Fibula	Iron
870	IrA I–IIA	Tomb 32	X680	West Cem. central strip	Ring (3)	Gold
871	IrA I–IIA	Tomb 32	X681	West Cem. central strip	Earring (2)	Copper alloy
872	IrA I–IIA	Tomb 32	X600	West Cem. north strip	Earring	Copper alloy
873	IrA I–IIA	Tomb 32	X290	West Cem. north strip	Earring	Silver
874	IrA IIA	Tomb 32	X572	West Cem. east strip	Bangle	Copper alloy (bronze)
875	IrA IIA	Tomb 32	X573	West Cem. east strip	Bangle (4)	Copper alloy
876	IrA IIA	Tomb 32	X574	West Cem. east strip	Bangle	Copper alloy
877	IrA IIA	Tomb 32	X575	West Cem. east strip	Bangle	Copper alloy
878	IrA IIA	Tomb 32	X576	West Cem. east strip	Bangle	Copper alloy
879	IrA IIA	Tomb 32	X577	West Cem. east strip	Bangle	Copper alloy
880	IrA IIA	Tomb 32	X578	West Cem. east strip	Bangle	Copper alloy
881	IrA IIA	Tomb 32	X579	West Cem. east strip	Bangle	Copper alloy
882	IrA IIA	Tomb 32	X583	West Cem. east strip	Bangle (2)	Copper alloy
883	IrA IIA	Tomb 32	X584	West Cem. east strip	Pin	Copper alloy
884	IrA IIA	Tomb 32	X585	West Cem. east strip	Ring	Copper alloy
885	IrA IIA	Tomb 32	X586	West Cem. east strip	Ring	Copper alloy
886	IrA IIA	Tomb 32	X587	West Cem. east strip	Bangle (5)	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
887	IrA IIA	Tomb 32	X589	West Cem. east strip	Bangle	Copper alloy
888	IrA IIA	Tomb 32	X590	West Cem. east strip	Bangle	Copper alloy
889	IrA IIA	Tomb 32	X591	West Cem. east strip	Ring	Copper alloy
890	IrA IIA	Tomb 32	X592	West Cem. east strip	Ring (3)	Copper alloy
891	IrA IIA	Tomb 32	X595	West Cem. east strip	Pin	Copper alloy
892	IrA IIA	Tomb 32	X595a	West Cem. north strip	Bangle	Copper alloy
893	IrA IIA	Tomb 32	X595b	West Cem. north strip	Bangle	Copper alloy
894	IrA IIA	Tomb 32	X595c	West Cem. north strip	Bangle	Copper alloy
895	IrA IIA	Tomb 32	X596	West Cem. north strip	Bangle	Copper alloy
896	IrA IIA	Tomb 32	X598	West Cem. north strip	Bangle (4)	Copper alloy
897	IrA IIA	Tomb 32	X601	West Cem. north strip	Bangle	Copper alloy
898	IrA IIA	Tomb 32	X602	West Cem. north strip	Bangle	Iron
899	IrA IIA	Tomb 32	X603	West Cem. north strip	Bangle	Copper alloy
900	IrA IIA	Tomb 32	X605	West Cem. north strip	Ring (3)	Copper alloy
901	IrA IIA	Tomb 32	X607	West Cem. north strip	Ring	Copper alloy
902	IrA IIA	Tomb 32	X608	West Cem. north strip	Pin	Copper alloy
903	IrA IIA	Tomb 32	X609	West Cem. south strip	Bangle	Copper alloy
904	IrA IIA	Tomb 32	X610	West Cem. south strip	Bangle	Iron
905	IrA IIA	Tomb 32	X611	West Cem. south strip	Pin	Copper alloy
906	IrA IIA	Tomb 32	X613	West Cem. south strip	Ring (4)	Copper alloy
907	IrA IIA	Tomb 32	X614	West Cem. south strip	Ring	Iron
908	IrA IIA	Tomb 32	X615	West Cem. south strip	Bangle	Copper alloy
909	IrA IIA	Tomb 32	X618	West Cem. south strip	Pin	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
911	IrA IIA	Tomb 32	X619	West Cem. south strip	Pin	Copper alloy
912	IrA IIA	Tomb 32	X621	West Cem. south strip	Pin	Copper alloy
913	IrA IIA	Tomb 32	X623	West Cem. south strip	Bangle	Copper alloy
914	IrA IIA	Tomb 32	X627	West Cem. south strip	Ring	Copper alloy
915	IrA IIA	Tomb 32	X628	West Cem. south strip	Pin	Copper alloy
916	IrA IIA	Tomb 32	X631	West Cem. west strip	Pin	Copper alloy
917	IrA IIA	Tomb 32	X629	West Cem. south strip	Pin	Copper alloy
918	IrA IIA	Tomb 32	X632	West Cem. north strip	Bangle	Copper alloy
919	IrA IIA	Tomb 32	X633	West Cem. north strip	Ring	Copper alloy
920	IrA IIA	Tomb 32	X634	West Cem. north strip	Ring	Copper alloy
921	IrA IIA	Tomb 32	X635	West Cem. north strip	Ring	Copper alloy
922	IrA IIA	Tomb 32	X637	West Cem. north strip	Ring	Copper alloy
923	IrA IIA	Tomb 32	X638	West Cem. north strip	Ring	Copper alloy
924	IrA IIA	Tomb 32	X639	West Cem. north strip	Ring	Copper alloy
925	IrA IIA	Tomb 32	X642	West Cem. north strip	Pin	Copper alloy
926	IrA IIA	Tomb 32	X643	West Cem. north strip	Pin	Copper alloy
927	IrA IIA	Tomb 32	X645	West Cem. north strip	Pin	Copper alloy
928	IrA IIA	Tomb 32	X646	West Cem. north strip	Pin	Copper alloy
929	IrA IIA	Tomb 32	X647	West Cem. north strip	Pin	Copper alloy
930	IrA IIA	Tomb 32	X648	West Cem. north strip	Bangle (2)	Iron
931	IrA IIA	Tomb 32	X649	West Cem. north strip	Bangle	Iron
932	IrA IIA	Tomb 32	X650	West Cem. north strip	Bangle (2)	Iron
933	IrA IIA	Tomb 32	X651	West Cem. north strip	Bangle	Iron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
934	IrA IIA	Tomb 32	X652	West Cem. north strip	Ring	Iron
935	IrA IIA	Tomb 32	X657	West Cem. south strip	Bangle	Copper alloy
936	IrA IIA	Tomb 32	X658	West Cem. south strip	Bangle	Iron
937	IrA IIA	Tomb 32	X659	West Cem. south strip	Pin	Copper alloy
938	IrA IIA	Tomb 32	X660	West Cem. south strip	Pin	Copper alloy
939	IrA IIA	Tomb 32	X664	West Cem. south strip	Ring	Copper alloy
940	IrA IIA	Tomb 32	X665	West Cem. south strip	Ring	Copper alloy
941	IrA IIA	Tomb 32	X668	West Cem. middle strip	Bangle	Copper alloy
942	IrA IIA	Tomb 32	X669	West Cem. middle strip	Ring	Copper alloy
943	IrA IIA	Tomb 32	X670	West Cem. middle strip	Pin	Copper alloy
944	IrA IIA	Tomb 32	X672	West Cem. middle strip	Pin	Copper alloy
945	IrA IIA	Tomb 32	X673	West Cem. middle strip	Ring	Copper alloy
946	IrA IIA	Tomb 32	X678	West Cem. middle strip	Bead (31)	Copper alloy
947	IrA IIA	Tomb 32	X597	West Cem. north strip	Fibula	Copper alloy
948	IrA IIA	Tomb 32	X624	West Cem. south strip	Fibula	Copper alloy
949	IrA IIA	Tomb 32	X667	West Cem. south strip	Fibula	Copper alloy
950	IrA IIA	Tomb 32	X604	West Cem. north strip	Pin	Copper alloy
951	IrA IIA	Tomb 32	X617	West Cem. south strip	Ring	Copper alloy
952	IrA IIA	Tomb 32	X593	West Cem. south strip	Ring	Iron
953	IrA IIA	Tomb 32	X644	West Cem. north strip	Pin (2)	Copper alloy
954	IrA IIA	Tomb 32	X571	West Cem. east strip	Bangle	Copper alloy
955	IrA IIA	Tomb 32	X612	West Cem. south strip	Pin	Copper alloy
956	IrA IIA	Tomb 32	X630a	West Cem. south strip	Pin	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
957	IrA IIA	Tomb 32	X630b	West Cem. south strip	Pin	Copper alloy
958	IrA IIA	Tomb 32	X667	West Cem. south strip	Pin	Copper alloy
959	IrA IIA	Tomb 32	X620	West Cem. south strip	Pin	Copper alloy
960	IrA IIA	Tomb 32		West Cem. north strip	Bangle (3)	Copper alloy (bronze)
961	IrA I–IIA	Tomb 54	X303a	NE Necropolis	Pin	Copper alloy
962	IrA I–IIA	Tomb 54	X303b	NE Necropolis	Pin	Copper alloy
963	IrA I–IIA	Tomb 54	X303c	NE Necropolis	Pin	Copper alloy
964	IrA I–IIA	Tomb 54	X290d	NE Necropolis	Earring	Copper alloy
965	IrA I–IIA	Tomb 54	X290a	NE Necropolis	Earring	Copper alloy
966	IrA I–IIA	Tomb 54	X310	NE Necropolis	Bangle (8)	Copper alloy (bronze)
967	IrA I–IIA	Tomb 54	X290e	NE Necropolis	Earring	Silver
968	IrA I–IIA	Tomb 54	X290c	NE Necropolis	Earring	Copper alloy
969	IrA I–IIA	Tomb 54	X291	NE Necropolis	Earring	Gold
970	IrA I–IIA	Tomb 54	X290b	NE Necropolis	Earring	Copper alloy
971	IrA I–IIA	Tomb 54	X295	NE Necropolis	Ring (4)	Iron
972	IrA I–IIA	Tomb 54	2660	NE Necropolis	Pin	Copper alloy
973	IrA I–IIA	Tomb 54	X299	NE Necropolis	Pin	Copper alloy
974	IrA I–IIA	Tomb 54	X300	NE Necropolis	Pin	Copper alloy
975	IrA I–IIA	Tomb 54	2658	NE Necropolis	Pin	Copper alloy
976	IrA I–IIA	Tomb 54	X302	NE Necropolis	Pin	Copper alloy
977	IrA I–IIA	Tomb 54	X304	NE Necropolis	Pin	Copper alloy
978	IrA I–IIA	Tomb 54	X307	NE Necropolis	Bangle (2)	Copper alloy
979	IrA I–IIA	Tomb 54	X308	NE Necropolis	Bangle (2)	Copper alloy
980	IrA I–IIA	Tomb 54	X309	NE Necropolis	Bangle	Copper alloy
981	IrA IIA	Tomb 54	X293a	NE Necropolis	Earring	Silver
982	IrA IIA	Tomb 54	X293b	NE Necropolis	Earring	Silver
864	IrA I–IIA	Tomb 32	X640	West Cem. north strip	Earring (2)	Copper alloy
865	IrA I–IIA	Tomb 32	X640	West Cem. north strip	Earring (3)	Copper alloy
866	IrA I–IIA	Tomb 32	X682	West Cem. central strip	Earring (3)	Gold
867	IrA I–IIA	Tomb 32	X679	West Cem. central strip	Earring (3)	Silver
868	IrA I–IIA	Tomb 32	X641	West Cemetery	Earring	Copper alloy
869	IrA I–IIA	Tomb 32	X636	West Cemetery	Fibula	Iron
870	IrA I–IIA	Tomb 32	X680	West Cem. central strip	Ring (3)	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
871	IrA I–IIA	Tomb 32	X681	West Cem. central strip	Earring (2)	Copper alloy
872	IrA I–IIA	Tomb 32	X600	West Cem. north strip	Earring	Copper alloy
873	IrA I–IIA	Tomb 32	X290	West Cem. north strip	Earring	Silver
874	IrA IIA	Tomb 32	X572	West Cem. east strip	Bangle	Copper alloy (bronze)
875	IrA IIA	Tomb 32	X573	West Cem. east strip	Bangle (4)	Copper alloy
876	IrA IIA	Tomb 32	X574	West Cem. east strip	Bangle	Copper alloy
877	IrA IIA	Tomb 32	X575	West Cem. east strip	Bangle	Copper alloy
878	IrA IIA	Tomb 32	X576	West Cem. east strip	Bangle	Copper alloy
879	IrA IIA	Tomb 32	X577	West Cem. east strip	Bangle	Copper alloy
880	IrA IIA	Tomb 32	X578	West Cem. east strip	Bangle	Copper alloy
881	IrA IIA	Tomb 32	X579	West Cem. east strip	Bangle	Copper alloy
882	IrA IIA	Tomb 32	X583	West Cem. east strip	Bangle (2)	Copper alloy
883	IrA IIA	Tomb 32	X584	West Cem. east strip	Pin	Copper alloy
884	IrA IIA	Tomb 32	X585	West Cem. east strip	Ring	Copper alloy
885	IrA IIA	Tomb 32	X586	West Cem. east strip	Ring	Copper alloy
886	IrA IIA	Tomb 32	X587	West Cem. east strip	Bangle (5)	Copper alloy
887	IrA IIA	Tomb 32	X589	West Cem. east strip	Bangle	Copper alloy
888	IrA IIA	Tomb 32	X590	West Cem. east strip	Bangle	Copper alloy
889	IrA IIA	Tomb 32	X591	West Cem. east strip	Ring	Copper alloy
890	IrA IIA	Tomb 32	X592	West Cem. east strip	Ring (3)	Copper alloy
891	IrA IIA	Tomb 32	X595	West Cem. east strip	Pin	Copper alloy
892	IrA IIA	Tomb 32	X595a	West Cem. north strip	Bangle	Copper alloy
893	IrA IIA	Tomb 32	X595b	West Cem. north strip	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
894	IrA IIA	Tomb 32	X595c	West Cem. north strip	Bangle	Copper alloy
895	IrA IIA	Tomb 32	X596	West Cem. north strip	Bangle	Copper alloy
896	IrA IIA	Tomb 32	X598	West Cem. north strip	Bangle (4)	Copper alloy
897	IrA IIA	Tomb 32	X601	West Cem. north strip	Bangle	Copper alloy
898	IrA IIA	Tomb 32	X602	West Cem. north strip	Bangle	Iron
899	IrA IIA	Tomb 32	X603	West Cem. north strip	Bangle	Copper alloy
900	IrA IIA	Tomb 32	X605	West Cem. north strip	Ring (3)	Copper alloy
901	IrA IIA	Tomb 32	X607	West Cem. north strip	Ring	Copper alloy
902	IrA IIA	Tomb 32	X608	West Cem. north strip	Pin	Copper alloy
903	IrA IIA	Tomb 32	X609	West Cem. south strip	Bangle	Copper alloy
904	IrA IIA	Tomb 32	X610	West Cem. south strip	Bangle	Iron
905	IrA IIA	Tomb 32	X611	West Cem. south strip	Pin	Copper alloy
906	IrA IIA	Tomb 32	X613	West Cem. south strip	Ring (4)	Copper alloy
907	IrA IIA	Tomb 32	X614	West Cem. south strip	Ring	Iron
908	IrA IIA	Tomb 32	X615	West Cem. south strip	Bangle	Copper alloy
909	IrA IIA	Tomb 32	X618	West Cem. south strip	Pin	Copper alloy
911	IrA IIA	Tomb 32	X619	West Cem. south strip	Pin	Copper alloy
912	IrA IIA	Tomb 32	X621	West Cem. south strip	Pin	Copper alloy
913	IrA IIA	Tomb 32	X623	West Cem. south strip	Bangle	Copper alloy
914	IrA IIA	Tomb 32	X627	West Cem. south strip	Ring	Copper alloy
915	IrA IIA	Tomb 32	X628	West Cem. south strip	Pin	Copper alloy
916	IrA IIA	Tomb 32	X631	West Cem. west strip	Pin	Copper alloy
917	IrA IIA	Tomb 32	X629	West Cem. south strip	Pin	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
918	IrA IIA	Tomb 32	X632	West Cem. north strip	Bangle	Copper alloy
919	IrA IIA	Tomb 32	X633	West Cem. north strip	Ring	Copper alloy
920	IrA IIA	Tomb 32	X634	West Cem. north strip	Ring	Copper alloy
921	IrA IIA	Tomb 32	X635	West Cem. north strip	Ring	Copper alloy
922	IrA IIA	Tomb 32	X637	West Cem. north strip	Ring	Copper alloy
923	IrA IIA	Tomb 32	X638	West Cem. north strip	Ring	Copper alloy
924	IrA IIA	Tomb 32	X639	West Cem. north strip	Ring	Copper alloy
925	IrA IIA	Tomb 32	X642	West Cem. north strip	Pin	Copper alloy
926	IrA IIA	Tomb 32	X643	West Cem. north strip	Pin	Copper alloy
927	IrA IIA	Tomb 32	X645	West Cem. north strip	Pin	Copper alloy
928	IrA IIA	Tomb 32	X646	West Cem. north strip	Pin	Copper alloy
929	IrA IIA	Tomb 32	X647	West Cem. north strip	Pin	Copper alloy
930	IrA IIA	Tomb 32	X648	West Cem. north strip	Bangle (2)	Iron
931	IrA IIA	Tomb 32	X649	West Cem. north strip	Bangle	Iron
932	IrA IIA	Tomb 32	X650	West Cem. north strip	Bangle (2)	Iron
933	IrA IIA	Tomb 32	X651	West Cem. north strip	Bangle	Iron
934	IrA IIA	Tomb 32	X652	West Cem. north strip	Ring	Iron
935	IrA IIA	Tomb 32	X657	West Cem. south strip	Bangle	Copper alloy
936	IrA IIA	Tomb 32	X658	West Cem. south strip	Bangle	Iron
937	IrA IIA	Tomb 32	X659	West Cem. south strip	Pin	Copper alloy
938	IrA IIA	Tomb 32	X660	West Cem. south strip	Pin	Copper alloy
939	IrA IIA	Tomb 32	X664	West Cem. south strip	Ring	Copper alloy
940	IrA IIA	Tomb 32	X665	West Cem. south strip	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
941	IrA IIA	Tomb 32	X668	West Cem. middle strip	Bangle	Copper alloy
942	IrA IIA	Tomb 32	X669	West Cem. middle strip	Ring	Copper alloy
943	IrA IIA	Tomb 32	X670	West Cem. middle strip	Pin	Copper alloy
944	IrA IIA	Tomb 32	X672	West Cem. middle strip	Pin	Copper alloy
945	IrA IIA	Tomb 32	X673	West Cem. middle strip	Ring	Copper alloy
946	IrA IIA	Tomb 32	X678	West Cem. middle strip	Bead (31)	Copper alloy
947	IrA IIA	Tomb 32	X597	West Cem. north strip	Fibula	Copper alloy
948	IrA IIA	Tomb 32	X624	West Cem. south strip	Fibula	Copper alloy
949	IrA IIA	Tomb 32	X667	West Cem. south strip	Fibula	Copper alloy
950	IrA IIA	Tomb 32	X604	West Cem. north strip	Pin	Copper alloy
951	IrA IIA	Tomb 32	X617	West Cem. south strip	Ring	Copper alloy
952	IrA IIA	Tomb 32	X593	West Cem. south strip	Ring	Iron
953	IrA IIA	Tomb 32	X644	West Cem. north strip	Pin (2)	Copper alloy
954	IrA IIA	Tomb 32	X571	West Cem. east strip	Bangle	Copper alloy
955	IrA IIA	Tomb 32	X612	West Cem. south strip	Pin	Copper alloy
956	IrA IIA	Tomb 32	X630a	West Cem. south strip	Pin	Copper alloy
957	IrA IIA	Tomb 32	X630b	West Cem. south strip	Pin	Copper alloy
958	IrA IIA	Tomb 32	X667	West Cem. south strip	Pin	Copper alloy
959	IrA IIA	Tomb 32	X620	West Cem. south strip	Pin	Copper alloy
960	IrA IIA	Tomb 32	N. No.	West Cem. north strip	Bangle (3)	Copper alloy (bronze)
961	IrA I–IIA	Tomb 54	X303a	NE Necropolis	Pin	Copper alloy
962	IrA I–IIA	Tomb 54	X303b	NE Necropolis	Pin	Copper alloy
963	IrA I–IIA	Tomb 54	X303c	NE Necropolis	Pin	Copper alloy
964	IrA I–IIA	Tomb 54	X290d	NE Necropolis	Earring	Copper alloy
965	IrA I–IIA	Tomb 54	X290a	NE Necropolis	Earring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
966	IrA I–IIA	Tomb 54	X310	NE Necropolis	Bangle (8)	Copper alloy (bronze)
967	IrA I–IIA	Tomb 54	X290e	NE Necropolis	Earring	Silver
968	IrA I–IIA	Tomb 54	X290c	NE Necropolis	Earring	Copper alloy
969	IrA I–IIA	Tomb 54	X291	NE Necropolis	Earring	Gold
970	IrA I–IIA	Tomb 54	X290b	NE Necropolis	Earring	Copper alloy
971	IrA I–IIA	Tomb 54	X295	NE Necropolis	Ring (4)	Iron
972	IrA I–IIA	Tomb 54	2660	NE Necropolis	Pin	Copper alloy
973	IrA I–IIA	Tomb 54	X299	NE Necropolis	Pin	Copper alloy
974	IrA I–IIA	Tomb 54	X300	NE Necropolis	Pin	Copper alloy
975	IrA I–IIA	Tomb 54	2658	NE Necropolis	Pin	Copper alloy
976	IrA I–IIA	Tomb 54	X302	NE Necropolis	Pin	Copper alloy
977	IrA I–IIA	Tomb 54	X304	NE Necropolis	Pin	Copper alloy
978	IrA I–IIA	Tomb 54	X307	NE Necropolis	Bangle (2)	Copper alloy
979	IrA I–IIA	Tomb 54	X308	NE Necropolis	Bangle (2)	Copper alloy
980	IrA I–IIA	Tomb 54	X309	NE Necropolis	Bangle	Copper alloy
981	IrA IIA	Tomb 54	X293a	NE Necropolis	Earring	Silver
982	IrA IIA	Tomb 54	X293b	NE Necropolis	Earring	Silver

TAIYIBA

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
737	IrA I–IIA	Tomb 6	13032	Unknown	Ring	Copper alloy
738	IrA I–IIA	Tomb 6	13029	Unknown	Ring	Copper alloy
739	IrA I–IIA	Tomb 6	13011	Unknown	Ring	Copper alloy
740	IrA I–IIA	Tomb 6	13059	Unknown	Bangle	Copper alloy
741	IrA I–IIA	Tomb 6	13060	Unknown	Bangle	Copper alloy
742	IrA I–IIA	Tomb 6	13026	Unknown	Bangle	Copper alloy
743	IrA I–IIA	Tomb 6	13077	Unknown	Bangle	Copper alloy
744	IrA I–IIA	Tomb 6	13069	Unknown	Bangle	Copper alloy
745	IrA I–IIA	Tomb 6	13067	Unknown	Bangle	Copper alloy
746	IrA I–IIA	Tomb 6	13063	Unknown	Bangle	Copper alloy
747	IrA I–IIA	Tomb 6	13062	Unknown	Bangle	Copper alloy
748	IrA I–IIA	Tomb 6	13061	Unknown	Bangle	Copper alloy
749	IrA I–IIA	Tomb 6	13007	Unknown	Bangle	Copper alloy
750	IrA I–IIA	Tomb 6	13006	Unknown	Bangle	Copper alloy
751	IrA I–IIA	Tomb 6	13014	Unknown	Bangle	Copper alloy
752	IrA I–IIA	Tomb 6	13013	Unknown	Bangle	Copper alloy
753	IrA I–IIA	Tomb 6	13016	Unknown	Bangle	Copper alloy
754	IrA I–IIA	Tomb 6	13058	Unknown	Bangle	Copper alloy
755	IrA I–IIA	Tomb 6	13053	Unknown	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
756	IrA I–IIA	Tomb 6	13030	Unknown	Pin	Copper alloy
757	IrA I–IIA	Tomb 6	13027	Unknown	Bangle	Copper alloy
758	IrA I–IIA	Tomb 6	13012	Unknown	Bangle	Copper alloy
759	IrA I–IIA	Tomb 6	13057	Unknown	Bangle	Copper alloy
760	IrA I–IIA	Tomb 6	13072	Unknown	Ring	Copper alloy
761	IrA I–IIA	Tomb 6	13068	Unknown	Bangle	Copper alloy
762	IrA I–IIA	Tomb 6	13020	Unknown	Pin	Copper alloy
763	IrA I–IIA	Tomb 6	13002	Unknown	Bangle	Copper alloy
764	IrA I–IIA	Tomb 6	13019	Unknown	Bangle	Copper alloy
765	IrA I–IIA	Tomb 6	13017	Unknown	Bangle	Copper alloy
766	IrA I–IIA	Tomb 6	13018	Unknown	Bangle	Copper alloy
767	IrA I–IIA	Tomb 6	13022	Unknown	Pin	Copper alloy
768	IrA I–IIA	Tomb 6	13023	Unknown	Pin	Copper alloy
769	IrA I–IIA	Tomb 6	13024	Unknown	Pin	Copper alloy

TRANSJORDAN

Baq'ah Valley

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
983	IrA I	Cave A4	A4.60	Jebel al-Hawāyah	Bangle	Copper alloy
984	IrA I	Cave A4	A4.70	Jebel al-Hawāyah	Bangle	Copper alloy
985	IrA I	Cave A4	A4.203	Jebel al-Hawāyah	Bangle	Copper alloy
986	IrA I	Cave A4	A4.80	Jebel al-Hawāyah	Ring	Copper alloy
987	IrA I	Cave A4	A4.81	Jebel al-Hawāyah	Ring	Copper alloy
988	IrA I	Cave A4	A4.112	Jebel al-Hawāyah	Earring	Copper alloy
989	IrA I	Cave A4	A4.216	Jebel al-Hawāyah	Pin	Copper alloy
990	IrA I	Cave A4	A4.133 or A4.215	Jebel al-Hawāyah	Ring	Copper alloy
991	IrA I	Cave A4	A4.34	Jebel al-Hawāyah	Ring	Copper alloy
992	IrA I	Cave A4	A4.24	Jebel al-Hawāyah	Bangle	Copper alloy
993	IrA I	Cave A4	A4.61	Jebel al-Hawāyah	Bangle	Copper alloy
994	IrA I	Cave A4	A4.126	Jebel al-Hawāyah	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
995	IrA I	Cave A4	A4.127	Jebel al-Hawāyah	Bangle	Copper alloy
996	IrA I	Cave A4	A4.71	Jebel al-Hawāyah	Bangle	Copper alloy
997	IrA I	Cave A4	A4.62	Jebel al-Hawāyah	Bangle	Copper alloy
998	IrA I	Cave A4	A4.78	Jebel al-Hawāyah	Bangle	Copper alloy
999	IrA I	Cave A4	A4.73	Jebel al-Hawāyah	Bangle	Copper alloy
1000	IrA I	Cave A4	A4.119	Jebel al-Hawāyah	Bangle	Copper alloy
1001	IrA I	Cave A4	A4.121	Jebel al-Hawāyah	Bangle	Copper alloy (bronze)
1002	IrA I	Cave A4	A4.124	Jebel al-Hawāyah	Bangle	Copper alloy
1003	IrA I	Cave A4	A4.174	Jebel al-Hawāyah	Bangle	Copper alloy
1004	IrA I	Cave A4	A4.173	Jebel al-Hawāyah	Bangle	Copper alloy
1005	IrA I	Cave A4	A4.125	Jebel al-Hawāyah	Bangle	Copper alloy
1006	IrA I	Cave A4	A4.148	Jebel al-Hawāyah	Bangle	Iron
1007	IrA I	Cave A4	A4.14	Jebel al-Hawāyah	Bangle	Copper alloy
1008	IrA I	Cave A4	A4.226	Jebel al-Hawāyah	Bangle	Iron
1009	IrA I	Cave A4	A4.55	Jebel al-Hawāyah	Bangle	Iron (steel)
1010	IrA I	Cave A4	A4.13	Jebel al-Hawāyah	Bangle	Iron
1011	IrA I	Cave A4	A4.20	Jebel al-Hawāyah	Bangle	Iron (steel)
1012	IrA I	Cave A4	A4.139	Jebel al-Hawāyah	Bangle	Iron
1013	IrA I	Cave A4	A4.202	Jebel al-Hawāyah	Bangle	Iron
1014	IrA I	Cave A4	A4.41	Jebel al-Hawāyah	Bangle	Iron
1015	IrA I	Cave A4	A4.56	Jebel al-Hawāyah	Bangle	Iron
1016	IrA I	Cave A4	A4.123	Jebel al-Hawāyah	Bangle	Iron
1017	IrA I	Cave A4	A4.147a-d	Jebel al-Hawāyah	Bangle	Iron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1018	IrA I	Cave A4	A4.169	Jebel al-Hawāyah	Bangle	Iron
1019	IrA I	Cave A4	A4.171	Jebel al-Hawāyah	Bangle	Iron
1020	IrA I	Cave A4	A4.72	Jebel al-Hawāyah	Bangle	Iron
1021	IrA I	Cave A4	A4.29	Jebel al-Hawāyah	Bangle	Iron
1022	IrA I	Cave A4	A4.35	Jebel al-Hawāyah	Bangle	Iron
1023	IrA I	Cave A4	A4.74	Jebel al-Hawāyah	Bangle	Iron
1024	IrA I	Cave A4	A4.170	Jebel al-Hawāyah	Bangle	Iron
1025	IrA I	Cave A4	A4.179	Jebel al-Hawāyah	Bangle	Iron
1026	IrA I	Cave A4	A4.79	Jebel al-Hawāyah	Bangle	Iron
1027	IrA I	Cave A4	A4.25	Jebel al-Hawāyah	Bangle	Iron
1028	IrA I	Cave A4	A4.122	Jebel al-Hawāyah	Bangle	Iron
1029	IrA I	Cave A4	A4.76	Jebel al-Hawāyah	Bangle	Iron
1030	IrA I	Cave A4	A4.36	Jebel al-Hawāyah	Bangle	Iron
1031	IrA I	Cave A4	A4.37	Jebel al-Hawāyah	Bangle	Iron
1032	IrA I	Cave A4	A4.11	Jebel al-Hawāyah	Bangle	Iron
1033	IrA I	Cave A4	A4.135	Jebel al-Hawāyah	Bangle	Iron
1034	IrA I	Cave A4	A4.117	Jebel al-Hawāyah	Bangle	Iron
1035	IrA I	Cave A4	A4.77	Jebel al-Hawāyah	Bangle	Iron
1036	IrA I	Cave A4	A4.225	Jebel al-Hawāyah	Bangle	Iron
1037	IrA I	Cave A4	A4.162	Jebel al-Hawāyah	Earring	Copper alloy
1038	IrA I	Cave A4	A4.163	Jebel al-Hawāyah	Earring	Copper alloy
1039	IrA I	Cave A4	A4.182	Jebel al-Hawāyah	Earring	Copper alloy
1040	IrA I	Cave A4	A4.39	Jebel al-Hawāyah	Earring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1041	IrA I	Cave A4	A4.101	Jebel al-Hawāyah	Earring	Copper alloy
1042	IrA I	Cave A4	A4.38	Jebel al-Hawāyah	Earring	Copper alloy
1043	IrA I	Cave A4	A4.50	Jebel al-Hawāyah	Earring	Copper alloy
1044	IrA I	Cave A4	A4.15	Jebel al-Hawāyah	Earring	Copper alloy
1045	IrA I	Cave A4	A4.165	Jebel al-Hawāyah	Earring	Copper alloy
1046	IrA I	Cave A4	A4.110	Jebel al-Hawāyah	Earring	Copper alloy
1047	IrA I	Cave A4	A4.113	Jebel al-Hawāyah	Earring	Copper alloy
1048	IrA I	Cave A4	A4.114	Jebel al-Hawāyah	Earring	Copper alloy
1049	IrA I	Cave A4	A4.166	Jebel al-Hawāyah	Earring	Copper alloy
1050	IrA I	Cave A4	A4.197	Jebel al-Hawāyah	Earring	Copper alloy
1051	IrA I	Cave A4	A4.198	Jebel al-Hawāyah	Earring	Copper alloy
1052	IrA I	Cave A4	A4.214	Jebel al-Hawāyah	Earring	Copper alloy
1053	IrA I	Cave A4	A4.12	Jebel al-Hawāyah	Earring	Copper alloy
1054	IrA I	Cave A4	A4.9	Jebel al-Hawāyah	Earring	Copper alloy
1055	IrA I	Cave A4	A4.33	Jebel al-Hawāyah	Earring	Copper alloy
1056	IrA I	Cave A4	A4.57	Jebel al-Hawāyah	Earring	Copper alloy
1057	IrA I	Cave A4	A4.94	Jebel al-Hawāyah	Earring	Copper alloy
1058	IrA I	Cave A4	A4.111	Jebel al-Hawāyah	Earring	Copper alloy
1059	IrA I	Cave A4	A4.144	Jebel al-Hawāyah	Earring	Copper alloy
1060	IrA I	Cave A4	A4.145	Jebel al-Hawāyah	Earring	Copper alloy
1061	IrA I	Cave A4	A4.164	Jebel al-Hawāyah	Earring	Copper alloy
1062	IrA I	Cave A4	A4.167	Jebel al-Hawāyah	Earring	Copper alloy
1063	IrA I	Cave A4	A4.183	Jebel al-Hawāyah	Earring	Copper alloy (bronze)

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1064	IrA I	Cave A4	A4.199	Jebel al-Hawāyah	Earring	Copper alloy
1065	IrA I	Cave A4	A4.200	Jebel al-Hawāyah	Earring	Copper alloy
1066	IrA I	Cave A4	A4.201	Jebel al-Hawāyah	Earring	Copper alloy
1067	IrA I	Cave A4	A4.204	Jebel al-Hawāyah	Earring	Copper alloy
1068	IrA I	Cave A4	A4.205	Jebel al-Hawāyah	Earring	Copper alloy
1069	IrA I	Cave A4	A4.206	Jebel al-Hawāyah	Earring	Copper alloy
1070	IrA I	Cave A4	A4.220	Jebel al-Hawāyah	Earring	Copper alloy
1071	IrA I	Cave A4	A4.133	Jebel al-Hawāyah	Ring	Copper alloy
1072	IrA I	Cave A4	A4.109	Jebel al-Hawāyah	Ring	Copper alloy
1073	IrA I	Cave A4	A4.106	Jebel al-Hawāyah	Ring	Iron (steel)
1074	IrA I	Cave A4	A4.194	Jebel al-Hawāyah	Ring	Iron
1075	IrA I	Cave A4	A4.91	Jebel al-Hawāyah	Ring	Copper alloy
1076	IrA I	Cave A4	A4.107	Jebel al-Hawāyah	Ring	Copper alloy
1077	IrA I	Cave A4	A4.134	Jebel al-Hawāyah	Ring	Copper alloy
1078	IrA I	Cave A4	A4.177	Jebel al-Hawāyah	Ring	Copper alloy
1079	IrA I	Cave A4	A4.92	Jebel al-Hawāyah	Ring	Copper alloy
1080	IrA I	Cave A4	A4.93	Jebel al-Hawāyah	Ring	Copper alloy
1081	IrA I	Cave A4	A4.108	Jebel al-Hawāyah	Ring	Copper alloy
1082	IrA I	Cave A4	A4.129a	Jebel al-Hawāyah	Ring	Iron (steel)
1083	IrA I	Cave A4	A4.158	Jebel al-Hawāyah	Ring	Copper alloy
1084	IrA I	Cave A4	A4.160	Jebel al-Hawāyah	Ring	Copper alloy
1085	IrA I	Cave A4	A4.84	Jebel al-Hawāyah	Ring	Copper alloy
1086	IrA I	Cave A4	A4.130	Jebel al-Hawāyah	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1087	IrA I	Cave A4	A4.131	Jebel al-Hawāyah	Ring	Copper alloy
1088	IrA I	Cave A4	A4.141	Jebel al-Hawāyah	Ring	Copper alloy
1089	IrA I	Cave A4	A4.142	Jebel al-Hawāyah	Ring	Copper alloy
1090	IrA I	Cave A4	A4.143	Jebel al-Hawāyah	Ring	Copper alloy
1091	IrA I	Cave A4	A4.159	Jebel al-Hawāyah	Ring	Copper alloy
1092	IrA I	Cave A4	A4.161	Jebel al-Hawāyah	Ring	Copper alloy
1093	IrA I	Cave A4	A4.176	Jebel al-Hawāyah	Ring	Copper alloy
1094	IrA I	Cave A4	A4.181	Jebel al-Hawāyah	Ring	Copper alloy
1095	IrA I	Cave A4	A4.195	Jebel al-Hawāyah	Ring	Copper alloy
1096	IrA I	Cave A4	A4.129b	Jebel al-Hawāyah	Ring	Iron (steel)
1097	IrA I	Cave A4	A4.58	Jebel al-Hawāyah	Ring	Copper alloy (bronze)
1098	IrA I	Cave A4	A4.168-a-c	Jebel al-Hawāyah	Ring	Copper alloy
1099	IrA I	Cave A4	A4.196	Jebel al-Hawāyah	Ring	Copper alloy
1100	IrA I	Cave A4	A4.180	Jebel al-Hawāyah	Ring	Copper alloy
1101	IrA I	Cave A4	A4.221	Jebel al-Hawāyah	Ring	Copper alloy
1102	IrA I	Cave A4	A4.222	Jebel al-Hawāyah	Ring	Iron
1103	IrA I	Cave A4	A4.23	Jebel al-Hawāyah	Ring	Copper alloy
1104	IrA I	Cave A4	A4.82	Jebel al-Hawāyah	Ring	Copper alloy
1105	IrA I	Cave A4	A4.132	Jebel al-Hawāyah	Ring	Copper alloy
1106	IrA I	Cave A4	A4.31	Jebel al-Hawāyah	Ring	Copper alloy
1107	IrA I	Cave A4	A4.95	Jebel al-Hawāyah	Ring	Copper alloy
1108	IrA I	Cave A4	A4.100	Jebel al-Hawāyah	Pin	Copper alloy
1109	IrA I	Cave A4	A4.223	Jebel al-Hawāyah	Pin	Copper alloy (bronze)

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1110	IrA I	Cave A4	A4.83	Jebel al-Hawāyah	Ring	Iron
1111	IrA I	Cave A4	A4.140	Jebel al-Hawāyah	Pin	Copper alloy
1112	IrA I	Cave A4	A4.99	Jebel al-Hawāyah	Pin	Copper alloy
1113	IrA I	Cave A4	A4.120	Jebel al-Hawāyah	Bangle	Copper alloy
1114	IrA I	Cave A4	A4.172	Jebel al-Hawāyah	Bangle	Copper alloy
1115	IrA I	Cave A4	A4.175	Jebel al-Hawāyah	Bangle	Copper alloy
1116	IrA I	Cave A4	A4.68	Jebel al-Hawāyah	Ring	Copper alloy
1117	IrA I	Cave A4	A4.85	Jebel al-Hawāyah	Ring	Copper alloy
1118	IrA I	Cave A4	A4.178	Jebel al-Hawāyah	Ring	Copper alloy
1119	IrA I	Cave A4	A4.215	Jebel al-Hawāyah	Ring	Iron
983	IrA I	Cave A4	A4.60	Unknown	Bangle	Copper alloy
984	IrA I	Cave A4	A4.70	Jebel al-Hawāyah	Bangle	Copper alloy
985	IrA I	Cave A4	A4.203	Jebel al-Hawāyah	Bangle	Copper alloy
986	IrA I	Cave A4	A4.80	Jebel al-Hawāyah	Ring	Copper alloy
987	IrA I	Cave A4	A4.81	Jebel al-Hawāyah	Ring	Copper alloy
988	IrA I	Cave A4	A4.112	Jebel al-Hawāyah	Earring	Copper alloy
989	IrA I	Cave A4	A4.216	Jebel al-Hawāyah	Pin	Copper alloy
990	IrA I	Cave A4	A4.133 or A4.215	Jebel al-Hawāyah	Ring	Copper alloy
991	IrA I	Cave A4	A4.34	Jebel al-Hawāyah	Ring	Copper alloy
992	IrA I	Cave A4	A4.24	Jebel al-Hawāyah	Bangle	Copper alloy
993	IrA I	Cave A4	A4.61	Jebel al-Hawāyah	Bangle	Copper alloy
994	IrA I	Cave A4	A4.126	Jebel al-Hawāyah	Bangle	Copper alloy
995	IrA I	Cave A4	A4.127	Jebel al-Hawāyah	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
996	IrA I	Cave A4	A4.71	Jebel al-Hawāyah	Bangle	Copper alloy
997	IrA I	Cave A4	A4.62	Jebel al-Hawāyah	Bangle	Copper alloy
998	IrA I	Cave A4	A4.78	Jebel al-Hawāyah	Bangle	Copper alloy
999	IrA I	Cave A4	A4.73	Jebel al-Hawāyah	Bangle	Copper alloy
1000	IrA I	Cave A4	A4.119	Jebel al-Hawāyah	Bangle	Copper alloy
1001	IrA I	Cave A4	A4.121	Jebel al-Hawāyah	Bangle	Copper alloy (bronze)
1002	IrA I	Cave A4	A4.124	Jebel al-Hawāyah	Bangle	Copper alloy
1003	IrA I	Cave A4	A4.174	Jebel al-Hawāyah	Bangle	Copper alloy
1004	IrA I	Cave A4	A4.173	Jebel al-Hawāyah	Bangle	Copper alloy
1005	IrA I	Cave A4	A4.125	Jebel al-Hawāyah	Bangle	Copper alloy
1006	IrA I	Cave A4	A4.148	Jebel al-Hawāyah	Bangle	Iron
1007	IrA I	Cave A4	A4.14	Jebel al-Hawāyah	Bangle	Copper alloy
1008	IrA I	Cave A4	A4.226	Jebel al-Hawāyah	Bangle	Iron
1009	IrA I	Cave A4	A4.55	Jebel al-Hawāyah	Bangle	Iron (steel)
1010	IrA I	Cave A4	A4.13	Jebel al-Hawāyah	Bangle	Iron
1011	IrA I	Cave A4	A4.20	Jebel al-Hawāyah	Bangle	Iron (steel)
1012	IrA I	Cave A4	A4.139	Jebel al-Hawāyah	Bangle	Iron
1013	IrA I	Cave A4	A4.202	Jebel al-Hawāyah	Bangle	Iron
1014	IrA I	Cave A4	A4.41	Jebel al-Hawāyah	Bangle	Iron
1015	IrA I	Cave A4	A4.56	Jebel al-Hawāyah	Bangle	Iron
1016	IrA I	Cave A4	A4.123	Jebel al-Hawāyah	Bangle	Iron
1017	IrA I	Cave A4	A4.147a-d	Jebel al-Hawāyah	Bangle	Iron
1018	IrA I	Cave A4	A4.169	Jebel al-Hawāyah	Bangle	Iron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1019	IrA I	Cave A4	A4.171	Jebel al-Hawāyah	Bangle	Iron
1020	IrA I	Cave A4	A4.72	Jebel al-Hawāyah	Bangle	Iron
1021	IrA I	Cave A4	A4.29	Jebel al-Hawāyah	Bangle	Iron
1022	IrA I	Cave A4	A4.35	Jebel al-Hawāyah	Bangle	Iron
1023	IrA I	Cave A4	A4.74	Jebel al-Hawāyah	Bangle	Iron
1024	IrA I	Cave A4	A4.170	Jebel al-Hawāyah	Bangle	Iron
1025	IrA I	Cave A4	A4.179	Jebel al-Hawāyah	Bangle	Iron
1026	IrA I	Cave A4	A4.79	Jebel al-Hawāyah	Bangle	Iron
1027	IrA I	Cave A4	A4.25	Jebel al-Hawāyah	Bangle	Iron
1028	IrA I	Cave A4	A4.122	Jebel al-Hawāyah	Bangle	Iron
1029	IrA I	Cave A4	A4.76	Jebel al-Hawāyah	Bangle	Iron
1030	IrA I	Cave A4	A4.36	Jebel al-Hawāyah	Bangle	Iron
1031	IrA I	Cave A4	A4.37	Jebel al-Hawāyah	Bangle	Iron
1032	IrA I	Cave A4	A4.11	Jebel al-Hawāyah	Bangle	Iron
1033	IrA I	Cave A4	A4.135	Jebel al-Hawāyah	Bangle	Iron
1034	IrA I	Cave A4	A4.117	Jebel al-Hawāyah	Bangle	Iron
1035	IrA I	Cave A4	A4.77	Jebel al-Hawāyah	Bangle	Iron
1036	IrA I	Cave A4	A4.225	Jebel al-Hawāyah	Bangle	Iron
1037	IrA I	Cave A4	A4.162	Jebel al-Hawāyah	Earring	Copper alloy
1038	IrA I	Cave A4	A4.163	Jebel al-Hawāyah	Earring	Copper alloy
1039	IrA I	Cave A4	A4.182	Jebel al-Hawāyah	Earring	Copper alloy
1040	IrA I	Cave A4	A4.39	Jebel al-Hawāyah	Earring	Copper alloy
1041	IrA I	Cave A4	A4.101	Jebel al-Hawāyah	Earring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1042	IrA I	Cave A4	A4.38	Jebel al-Hawāyah	Earring	Copper alloy
1043	IrA I	Cave A4	A4.50	Jebel al-Hawāyah	Earring	Copper alloy
1044	IrA I	Cave A4	A4.15	Jebel al-Hawāyah	Earring	Copper alloy
1045	IrA I	Cave A4	A4.165	Jebel al-Hawāyah	Earring	Copper alloy
1046	IrA I	Cave A4	A4.110	Jebel al-Hawāyah	Earring	Copper alloy
1047	IrA I	Cave A4	A4.113	Jebel al-Hawāyah	Earring	Copper alloy
1048	IrA I	Cave A4	A4.114	Jebel al-Hawāyah	Earring	Copper alloy
1049	IrA I	Cave A4	A4.166	Jebel al-Hawāyah	Earring	Copper alloy
1050	IrA I	Cave A4	A4.197	Jebel al-Hawāyah	Earring	Copper alloy
1051	IrA I	Cave A4	A4.198	Jebel al-Hawāyah	Earring	Copper alloy
1052	IrA I	Cave A4	A4.214	Jebel al-Hawāyah	Earring	Copper alloy
1053	IrA I	Cave A4	A4.12	Jebel al-Hawāyah	Earring	Copper alloy
1054	IrA I	Cave A4	A4.9	Jebel al-Hawāyah	Earring	Copper alloy
1055	IrA I	Cave A4	A4.33	Jebel al-Hawāyah	Earring	Copper alloy
1056	IrA I	Cave A4	A4.57	Jebel al-Hawāyah	Earring	Copper alloy
1057	IrA I	Cave A4	A4.94	Jebel al-Hawāyah	Earring	Copper alloy
1058	IrA I	Cave A4	A4.111	Jebel al-Hawāyah	Earring	Copper alloy
1059	IrA I	Cave A4	A4.144	Jebel al-Hawāyah	Earring	Copper alloy
1060	IrA I	Cave A4	A4.145	Jebel al-Hawāyah	Earring	Copper alloy
1061	IrA I	Cave A4	A4.164	Jebel al-Hawāyah	Earring	Copper alloy
1062	IrA I	Cave A4	A4.167	Jebel al-Hawāyah	Earring	Copper alloy
1063	IrA I	Cave A4	A4.183	Jebel al-Hawāyah	Earring	Copper alloy (bronze)
1064	IrA I	Cave A4	A4.199	Jebel al-Hawāyah	Earring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1065	IrA I	Cave A4	A4.200	Jebel al-Hawāyah	Earring	Copper alloy
1066	IrA I	Cave A4	A4.201	Jebel al-Hawāyah	Earring	Copper alloy
1067	IrA I	Cave A4	A4.204	Jebel al-Hawāyah	Earring	Copper alloy
1068	IrA I	Cave A4	A4.205	Jebel al-Hawāyah	Earring	Copper alloy
1069	IrA I	Cave A4	A4.206	Jebel al-Hawāyah	Earring	Copper alloy
1070	IrA I	Cave A4	A4.220	Jebel al-Hawāyah	Earring	Copper alloy
1071	IrA I	Cave A4	A4.133	Jebel al-Hawāyah	Ring	Copper alloy
1072	IrA I	Cave A4	A4.109	Jebel al-Hawāyah	Ring	Copper alloy
1073	IrA I	Cave A4	A4.106	Jebel al-Hawāyah	Ring	Iron (steel)
1074	IrA I	Cave A4	A4.194	Jebel al-Hawāyah	Ring	Iron
1075	IrA I	Cave A4	A4.91	Jebel al-Hawāyah	Ring	Copper alloy
1076	IrA I	Cave A4	A4.107	Jebel al-Hawāyah	Ring	Copper alloy
1077	IrA I	Cave A4	A4.134	Jebel al-Hawāyah	Ring	Copper alloy
1078	IrA I	Cave A4	A4.177	Jebel al-Hawāyah	Ring	Copper alloy
1079	IrA I	Cave A4	A4.92	Jebel al-Hawāyah	Ring	Copper alloy
1080	IrA I	Cave A4	A4.93	Jebel al-Hawāyah	Ring	Copper alloy
1081	IrA I	Cave A4	A4.108	Jebel al-Hawāyah	Ring	Copper alloy
1082	IrA I	Cave A4	A4.129a	Jebel al-Hawāyah	Ring	Iron (steel)
1083	IrA I	Cave A4	A4.158	Jebel al-Hawāyah	Ring	Copper alloy
1084	IrA I	Cave A4	A4.160	Jebel al-Hawāyah	Ring	Copper alloy
1085	IrA I	Cave A4	A4.84	Jebel al-Hawāyah	Ring	Copper alloy
1086	IrA I	Cave A4	A4.130	Jebel al-Hawāyah	Ring	Copper alloy
1087	IrA I	Cave A4	A4.131	Jebel al-Hawāyah	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1088	IrA I	Cave A4	A4.141	Jebel al-Hawāyah	Ring	Copper alloy
1089	IrA I	Cave A4	A4.142	Jebel al-Hawāyah	Ring	Copper alloy
1090	IrA I	Cave A4	A4.143	Jebel al-Hawāyah	Ring	Copper alloy
1091	IrA I	Cave A4	A4.159	Jebel al-Hawāyah	Ring	Copper alloy
1092	IrA I	Cave A4	A4.161	Jebel al-Hawāyah	Ring	Copper alloy
1093	IrA I	Cave A4	A4.176	Jebel al-Hawāyah	Ring	Copper alloy
1094	IrA I	Cave A4	A4.181	Jebel al-Hawāyah	Ring	Copper alloy
1095	IrA I	Cave A4	A4.195	Jebel al-Hawāyah	Ring	Copper alloy
1096	IrA I	Cave A4	A4.129b	Jebel al-Hawāyah	Ring	Iron (steel)
1097	IrA I	Cave A4	A4.58	Jebel al-Hawāyah	Ring	Copper alloy (bronze)
1098	IrA I	Cave A4	A4.168-a-c	Jebel al-Hawāyah	Ring	Copper alloy
1099	IrA I	Cave A4	A4.196	Jebel al-Hawāyah	Ring	Copper alloy
1100	IrA I	Cave A4	A4.180	Jebel al-Hawāyah	Ring	Copper alloy
1101	IrA I	Cave A4	A4.221	Jebel al-Hawāyah	Ring	Copper alloy
1102	IrA I	Cave A4	A4.222	Jebel al-Hawāyah	Ring	Iron
1103	IrA I	Cave A4	A4.23	Jebel al-Hawāyah	Ring	Copper alloy
1104	IrA I	Cave A4	A4.82	Jebel al-Hawāyah	Ring	Copper alloy
1105	IrA I	Cave A4	A4.132	Jebel al-Hawāyah	Ring	Copper alloy
1106	IrA I	Cave A4	A4.31	Jebel al-Hawāyah	Ring	Copper alloy

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INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1120	LBA–IrA I	Tomb J.II	M32a	Area J	Earring	Copper alloy
1121	LBA–IrA I	Tomb J.II	M32b	Area J	Earring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1122	LBA–IrA I	Tomb J.II	M32c	Area J	Earring	Copper alloy
1123	LBA–IrA I	External of Tomb J.II	M46a	Area J	Earring	Copper alloy
1124	LBA–IrA I	External of Tomb J.II	M46b	Area J	Ring	Iron
1125	LBA–IrA I	Tomb J.VII	M15	Area J	Earring	Copper alloy
1126	LBA–IrA I	Tomb J.VII	M19	Area J	Ring	Copper alloy
1127	LBA–IrA I	Tomb J.VII	M21	Area J	Ring	Iron
1128	LBA–IrA I	Tomb J.VII	M36a	Area J	Bangle	Iron
1129	LBA–IrA I	Tomb J.VII	M36b	Area J	Bangle (2)	Iron
1130	LBA–IrA I	Tomb J.VII	M42	Area J	Ring	Copper alloy
1131	LBA–IrA I	Tomb J.VIII	M26a	Area J	Earring	Copper alloy
1132	LBA–IrA I	Tomb J.VIII	M26b	Area J	Earring	Copper alloy
1133	LBA–IrA I	Tomb J.VIII	M40	Area J	Bangle (2)	Iron
1134	LBA–IrA I	Tomb J.VIII	M45a	Area J	Earring	Copper alloy
1135	LBA–IrA I	Tomb J.VIII	M45b	Area J	Ring (2)	Copper alloy
1136	LBA–IrA I	Tomb J.XV	M28a	Area J	Earring	Copper alloy
1137	LBA–IrA I	Tomb J.XV	M28b	Area J	Earring	Copper alloy
1138	LBA–IrA I	Tomb J.XV	M28c	Area J	Earring	Copper alloy
1139	LBA–IrA I	Tomb J.XV	M25	Area J	Bangle	Copper alloy
1140	LBA–IrA I	Tomb J.XV	M2b	Area J	Earring	Copper alloy
1141	LBA–IrA I	Tomb J.XV	M2a	Area J	Earring	Copper alloy
1142	LBA–IrA I	Tomb J.XV	M3	Area J	Earring	Copper alloy
1143	LBA–IrA I	Tomb J.XV	M4	Area J	Earring	Copper alloy
1144	LBA–IrA I	Tomb J.XV	M1	Area J	Bangle	Copper alloy
1145	LBA–IrA I	Tomb J.XV	M13	Area J	Bangle	Copper alloy
1146	LBA–IrA I	Tomb J.XV	M7	Area J	Earring	Copper alloy
1147	LBA–IrA I	Tomb J.XV	M31	Area J	Earring	Copper alloy
1148	LBA–IrA I	Tomb J.XVII	M34f	Area J	Earring	Copper alloy
1149	LBA–IrA I	Tomb J.XVII	M34a	Area J	Earring	Copper alloy
1150	LBA–IrA I	Tomb J.XVII	M34b	Area J	Earring	Copper alloy
1151	LBA–IrA I	Tomb J.XVII	M34e	Area J	Earring	Copper alloy
1152	LBA–IrA I	Tomb J.XVII	M34c	Area J	Earring	Copper alloy
1153	LBA–IrA I	Tomb J.XVII	M34d	Area J	Earring	Copper alloy
1154	LBA–IrA I	Tomb J.XVII	M8	Area J	Hair spiral	Lead
1155	LBA–IrA I	Tomb J.XVII	M20	Area J	Ring	Copper alloy
1156	LBA–IrA I	Tomb J.XVII	M23	Area J	Ring	Copper alloy
1157	LBA–IrA I	Tomb J.XVII	M22	Area J	Ring	Copper alloy
1158	LBA–IrA I	Tomb J.XVII	M24	Area J	Ring (2)	Copper alloy
1159	LBA–IrA I	Tomb J.XVII	M33	Area J	Ring	Copper alloy
1160	LBA–IrA I	Tomb J.XXX	M41a	Area J	Ring	Iron
1161	LBA–IrA I	Tomb J.XXX	M43	Area J	Earring	Copper alloy

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INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1162	IrA I	Tomb A	177	East of tell	Pin	Copper alloy
1163	IrA I	Tomb A	174	East of tell	Pin	Copper alloy
1164	IrA I	Tomb A	173	East of tell	Pin	Copper alloy
1165	IrA I	Tomb A	171	East of tell	Pin	Copper alloy
1166	IrA I	Tomb A	176	East of tell	Pin	Copper alloy
1167	IrA I	Tomb A	166	East of tell	Pin	Copper alloy
1168	IrA I	Tomb A	197	East of tell	Earring (2)	Copper alloy
1169	IrA I	Tomb A	220	East of tell	Ring	Copper alloy
1170	IrA I	Tomb A	167	East of tell	Pin	Copper alloy
1171	IrA I	Tomb A	168	East of tell	Pin	Copper alloy
1172	IrA I	Tomb A	169	East of tell	Pin	Copper alloy
1173	IrA I	Tomb A	170	East of tell	Pin	Copper alloy
1174	IrA I	Tomb A	172	East of tell	Pin	Copper alloy
1175	IrA I	Tomb A	175	East of tell	Pin	Copper alloy
1176	IrA I	Tomb A	202	East of tell	Earring (64)	Copper alloy
1177	IrA I	Tomb A	206	East of tell	Earring	Copper alloy
1178	IrA I	Tomb A	207	East of tell	Earring	Copper alloy
1179	IrA I	Tomb A	211	East of tell	Earring	Silver
1180	IrA I	Tomb A	212	East of tell	Earring	Silver
1181	IrA I	Tomb A	213	East of tell	Earring	Silver
1182	IrA I	Tomb A	221	East of tell	Ring	Copper alloy
1183	IrA I	Tomb A	222	East of tell	Ring	Copper alloy
1184	IrA I	Tomb A	223	East of tell	Ring	Copper alloy
1185	IrA I	Tomb A	224	East of tell	Ring	Copper alloy
1186	IrA I	Tomb A	225	East of tell	Ring	Copper alloy
1187	IrA I	Tomb A	226	East of tell	Ring	Copper alloy
1188	IrA I	Tomb A	227	East of tell	Ring	Copper alloy
1189	IrA I	Tomb A	228	East of tell	Ring	Iron
1190	IrA I	Tomb A	229	East of tell	Ring	Iron
1191	IrA I	Tomb A	195	East of tell	Pendant	Copper alloy
1192	IrA I	Tomb A	150	East of tell	Bangle (38)	Copper alloy
1193	IrA I	Tomb A	155	East of tell	Bangle	Copper alloy
1194	IrA I	Tomb A	156	East of tell	Bangle	Copper alloy
1195	IrA I	Tomb A	157	East of tell	Bangle	Copper alloy
1196	IrA I	Tomb A	160	East of tell	Bangle	Iron
1197	IrA I	Tomb A	161	East of tell	Bangle	Iron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1198	IrA I	Tomb 1	N. No.	Area C	Earring	Copper alloy
1199	IrA I	Tomb 1	N. No.	Area C	Earring	Copper alloy
1200	IrA I	Tomb 1	74	Area C	Earring	Gold
1201	IrA I	Tomb 1	N. No.	Area C	Earring	Gold
1202	IrA I	Tomb 1	120	Area C	Bangle	Copper alloy
1203	IrA I	Tomb 1	121	Area C	Bangle	Copper alloy
1204	IrA I	Tomb 1	111	Area C	Bangle	Copper alloy
1205	IrA I	Tomb 1	111	Area C	Bangle	Copper alloy
1206	IrA I	Tomb 1	201	Area C	Bangle	Copper alloy
1207	IrA I	Tomb 1	201	Area C	Bangle	Copper alloy
1208	IrA I	Tomb 1	103	Area C	Bangle	Copper alloy
1209	IrA I	Tomb 1	N. No.	Area C	Bangle	Iron
1210	IrA I	Tomb 1	N. No.	Area C	Bangle	Iron
1211	IrA I	Tomb 1	109	Area C	Bangle	Copper alloy
1212	IrA I	Tomb 1	109	Area C	Bangle	Copper alloy
1213	IrA I	Tomb 1	N. No.	Area C	Bangle	Iron
1214	IrA I	Tomb 1	110	Area C	Bangle	Copper alloy
1215	IrA I	Tomb 1	110	Area C	Bangle	Copper alloy
1216	IrA I	Tomb 1	110	Area C	Bangle	Copper alloy
1217	IrA I	Tomb 1	110	Area C	Bangle	Copper alloy
1218	IrA I	Tomb 1	N. No.	Area C	Earring	Copper alloy
1219	IrA I	Tomb 1	N. No.	Area C	Earring	Copper alloy
1220	IrA I	Tomb 1	108	Area C	Bangle	Copper alloy
1221	IrA I	Tomb 1	108	Area C	Bangle	Copper alloy
1222	IrA I	Tomb 1	N. No.	Area C	Bangle	Iron
1223	IrA I	Tomb 1	N. No.	Area C	Ring	Iron
1224	LBA–IrA IIA	Tomb C	SA 180	Town centre	Ring	Copper alloy
1225	LBA–IrA IIA	Tomb C	SA 201	Town centre	Ring	Copper alloy
1226	LBA–IrA IIA	Tomb C	SA 289	Town centre	Pin	Copper alloy
1227	LBA–IrA IIA	Tomb C	SA 293	Town centre	Bangle	Copper alloy
1228	LBA–IrA IIA	Tomb C	SA 294	Town centre	Bangle	Copper alloy
1229	LBA–IrA IIA	Tomb C	SA 295	Town centre	Bangle	Copper alloy
1230	LBA–IrA IIA	Tomb C	SA 296	Town centre	Bangle	Copper alloy
1231	LBA–IrA IIA	Tomb C	SA 297	Town centre	Bangle	Copper alloy
1232	LBA–IrA IIA	Tomb C	SA 301	Town centre	Bangle	Copper alloy
1233	LBA–IrA IIA	Tomb C	SA 304	Town centre	Bangle	Copper alloy
1234	LBA–IrA IIA	Tomb C	SA 305	Town centre	Bangle	Copper alloy
1235	LBA–IrA IIA	Tomb C	SA 306	Town centre	Pin	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1236	LBA–IrA IIA	Tomb C	SA 307	Town centre	Pin	Copper alloy
1237	LBA–IrA IIA	Tomb C	SA 309	Town centre	Bangle	Copper alloy
1238	LBA–IrA IIA	Tomb C	SA 310	Town centre	Bangle	Copper alloy
1240	LBA–IrA IIA	Tomb C	SA 312	Town centre	Bangle	Copper alloy
1241	LBA–IrA IIA	Tomb C	SA 313	Town centre	Bangle	Copper alloy
1244	LBA–IrA IIA	Tomb C	SA 314	Town centre	Bangle	Copper alloy
1245	LBA–IrA IIA	Tomb C	SA 317	Town centre	Bangle	Copper alloy
1246	LBA–IrA IIA	Tomb C	SA 318	Town centre	Bangle	Copper alloy
1248	LBA–IrA IIA	Tomb C	SA 320	Town centre	Bangle	Copper alloy
1249	LBA–IrA IIA	Tomb C	SA 321	Town centre	Bangle	Copper alloy
1250	LBA–IrA IIA	Tomb C	SA 324	Town centre	Bangle	Copper alloy
1251	LBA–IrA IIA	Tomb C	SA 325	Town centre	Bangle	Copper alloy
1252	LBA–IrA IIA	Tomb C	SA 326	Town centre	Bangle	Copper alloy
1253	LBA–IrA IIA	Tomb C	SA 327	Town centre	Bangle	Copper alloy
1254	LBA–IrA IIA	Tomb C	SA 328	Town centre	Bangle	Copper alloy
1255	LBA–IrA IIA	Tomb C	SA 329	Town centre	Bangle	Copper alloy
1256	LBA–IrA IIA	Tomb C	SA 330	Town centre	Bangle	Copper alloy
1257	LBA–IrA IIA	Tomb C	SA 331	Town centre	Bangle	Copper alloy
1258	LBA–IrA IIA	Tomb C	SA 332	Town centre	Bangle	Copper alloy
1259	LBA–IrA IIA	Tomb C	SA 333	Town centre	Bangle	Copper alloy
1262	LBA–IrA IIA	Tomb C	SA 336	Town centre	Bangle	Copper alloy
1263	LBA–IrA IIA	Tomb C	SA 337	Town centre	Bangle	Copper alloy
1264	LBA–IrA IIA	Tomb C	SA 338	Town centre	Bangle	Copper alloy
1265	LBA–IrA IIA	Tomb C	SA 339	Town centre	Bangle	Copper alloy
1266	LBA–IrA IIA	Tomb C	SA 340	Town centre	Bangle	Copper alloy
1267	LBA–IrA IIA	Tomb C	SA 341	Town centre	Bangle	Copper alloy
1268	LBA–IrA IIA	Tomb C	SA 342	Town centre	Bangle	Copper alloy
1269	LBA–IrA IIA	Tomb C	SA 343	Town centre	Bangle	Copper alloy
1270	LBA–IrA IIA	Tomb C	SA 344	Town centre	Bangle	Copper alloy
1271	LBA–IrA IIA	Tomb C	SA 345	Town centre	Bangle	Copper alloy
1272	LBA–IrA IIA	Tomb C	SA 346	Town centre	Bangle	Copper alloy
1273	LBA–IrA IIA	Tomb C	SA 347	Town centre	Pin	Copper alloy
1274	LBA–IrA IIA	Tomb C	SA 351	Town centre	Pin	Copper alloy
1275	LBA–IrA IIA	Tomb C	SA 352	Town centre	Pin	Copper alloy
1276	LBA–IrA IIA	Tomb C	SA 353	Town centre	Pin	Copper alloy
1277	LBA–IrA IIA	Tomb C	SA 354	Town centre	Pin	Copper alloy
1278	LBA–IrA IIA	Tomb C	SA 355	Town centre	Pin	Copper alloy
1279	LBA–IrA IIA	Tomb C	SA 356	Town centre	Ring	Copper alloy
1280	LBA–IrA IIA	Tomb C	SA 358	Town centre	Earring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1281	LBA–IrA IIA	Tomb C	SA 359	Town centre	Ring	Copper alloy
1282	LBA–IrA IIA	Tomb C	SA 360	Town centre	Earring	Copper alloy
1283	LBA–IrA IIA	Tomb C	SA 361	Town centre	Earring	Copper alloy
1285	LBA–IrA IIA	Tomb C	SA 363	Town centre	Pendant	Copper alloy
1286	LBA–IrA IIA	Tomb C	SA 364	Town centre	Earring	Copper alloy
1287	LBA–IrA IIA	Tomb C	SA 365	Town centre	Ring	Copper alloy
1288	LBA–IrA IIA	Tomb C	SA 366	Town centre	Pendant	Copper alloy
1289	LBA–IrA IIA	Tomb C	SA 367	Town centre	Pendant	Copper alloy
1290	LBA–IrA IIA	Tomb C	SA 368	Town centre	Bangle	Copper alloy
1291	LBA–IrA IIA	Tomb C	SA 369	Town centre	Bangle	Copper alloy
1292	LBA–IrA IIA	Tomb C	SA 370	Town centre	Earring	Copper alloy
1293	LBA–IrA IIA	Tomb C	SA 371	Town centre	Bangle	Copper alloy
1294	LBA–IrA IIA	Tomb C	SA 372	Town centre	Ring	Copper alloy
1296	LBA–IrA IIA	Tomb C	SA 374	Town centre	Pin	Copper alloy
1297	LBA–IrA IIA	Tomb C	SA 375	Town centre	Pin	Copper alloy
1298	LBA–IrA IIA	Tomb C	SA 376	Town centre	Pin	Copper alloy
1299	LBA–IrA IIA	Tomb C	SA 377	Town centre	Bangle	Copper alloy
1300	LBA–IrA IIA	Tomb C	SA 378	Town centre	Bangle	Copper alloy
1301	LBA–IrA IIA	Tomb C	SA 379	Town centre	Bangle	Copper alloy
1302	LBA–IrA IIA	Tomb C	SA 380	Town centre	Bangle	Copper alloy
1303	LBA–IrA IIA	Tomb C	SA 381	Town centre	Bangle	Copper alloy
1304	LBA–IrA IIA	Tomb C	SA 382	Town centre	Bangle	Copper alloy
1305	LBA–IrA IIA	Tomb C	SA 383	Town centre	Bangle	Copper alloy
1306	LBA–IrA IIA	Tomb C	SA 384	Town centre	Bangle	Copper alloy
1307	LBA–IrA IIA	Tomb C	SA 385	Town centre	Bangle	Copper alloy
1308	LBA–IrA IIA	Tomb C	SA 386	Town centre	Bangle	Copper alloy
1309	LBA–IrA IIA	Tomb C	SA 387	Town centre	Bangle	Copper alloy
1310	LBA–IrA IIA	Tomb C	SA 388	Town centre	Bangle	Copper alloy
1311	LBA–IrA IIA	Tomb C	SA 389	Town centre	Bangle	Copper alloy
1312	LBA–IrA IIA	Tomb C	SA 390	Town centre	Bangle	Copper alloy
1313	LBA–IrA IIA	Tomb C	SA 391	Town centre	Bangle	Copper alloy
1314	LBA–IrA IIA	Tomb C	SA 392	Town centre	Bangle	Copper alloy
1315	LBA–IrA IIA	Tomb C	SA 393	Town centre	Bangle	Copper alloy
1316	LBA–IrA IIA	Tomb C	SA 394	Town centre	Bangle	Copper alloy
1317	LBA–IrA IIA	Tomb C	SA 395	Town centre	Bangle	Copper alloy
1318	LBA–IrA IIA	Tomb C	SA 396	Town centre	Bangle	Copper alloy
1319	LBA–IrA IIA	Tomb C	SA 397	Town centre	Bangle	Copper alloy
1320	LBA–IrA IIA	Tomb C	SA 398	Town centre	Bangle	Copper alloy
1321	LBA–IrA IIA	Tomb C	SA 399	Town centre	Bangle	Copper alloy
1322	LBA–IrA IIA	Tomb C	SA 357	Town centre	Earring	Copper alloy

SA'IDIYEH

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1323	LBA–IrA I	Tomb 459B	459.3	BB1200	Bangle (2)	Copper alloy
1324	LBA–IrA IIA	Tomb 51	51.1	BB600	Bangle	Copper alloy
1325	LBA–IrA IIA	Tomb 51	51.3	BB600	Bangle	Copper alloy
1326	LBA–IrA IIA	Tomb 51	51.6	BB600	Earring	Copper alloy
1327	LBA–IrA IIA	Tomb 51	51.4	BB600	Bangle	Copper alloy
1328	LBA–IrA IIA	Tomb 86	86.1	BB400	Pin	Copper alloy
1329	LBA–IrA I	Tomb 101	101.12	Lower tell	Pin	Electrum
1330	LBA–IrA I	Tomb 101	101.13	Lower tell	Pin	Electrum
1331	LBA–IrA I	Tomb 101	101.19	Lower tell	Bead (2)	Electrum
1332	LBA–IrA I	Tomb 101	101.11	Lower tell	Pendant (2)	Silver
1333	LBA–IrA I	Tomb 102	102.16	Lower tell	Ring	Copper alloy
1334	LBA–IrA I	Tomb 102	102.15	Lower tell	Ring	Copper alloy
1335	LBA–IrA I	Tomb 108	108.3	Lower tell	Earring	Copper alloy
1336	LBA–IA IIA	Tomb 120	120.2	Lower tell	Bangle (2)	Copper alloy
1337	LBA–IrA I	Tomb 137	137.6	Lower tell	Earring	Copper alloy
1338	LBA–IrA IIA	Tomb 143	143.4	Lower tell	Ring	Copper alloy
1339	LBA–IrA I	Tomb 157	157.1	BB600	Pin	Copper alloy
1340	LBA–IrA IIA	Tomb 167	167.1	BB600	Earring	Copper alloy
1341	LBA–IrA I	Tomb 177	177.1	BB200	Bangle	Iron
1342a	LBA–IrA I	Tomb 209	209.1iii	BB400	Bangle	Iron
1342b	LBA–IrA I	Tomb 209	209.4	BB400	Bangle	Iron
1343	LBA–IrA I	Tomb 209	209.1	BB400	Earring	Gold
1344	LBA–IrA IIA	Tomb 213	213.1	BB100	Bangle	Copper alloy
1345	LBA–IrA I	Tomb 209	209.5	BB400	Pin	Copper alloy
1346	LBA–IrA I	Tomb 220	220.1	BB400	Bangle	Copper alloy
1347	LBA–IrA IIA	Tomb 230	230.2	BB400	Pin	Copper alloy
1348	LBA–IrA I	Tomb 245	245.2i	BB400	Earring	Copper alloy
1349	LBA–IrA I	Tomb 245	245.2ii	BB400	Earring	Copper alloy
1350	LBA–IrA I	Tomb 249B	249B.2	BB100	Ring	Copper alloy
1351	LBA–IrA IIA	Tomb 254	254.1	BB300	Earring	Copper alloy
1352	LBA–IrA IIA	Tomb 254	254.2	BB300	Earring	Copper alloy
1353	LBA–IrA IIA	Tomb 273	273.1	BB100	Pin	Copper alloy
1354	LBA–IrA I	Tomb 276	276.1	BB300	Bangle	Iron
1355	LBA–IrA I	Tomb 292	292.2	BB300/400	Bangle	Iron
1356	LBA–IrA I	Tomb 292	292.1	BB300/400	Bangle	Iron
1357	LBA–IrA I	Tomb 305	305.1	BB200	Pin	Copper alloy
1358	LBA–IrA I	Tomb 305	305.6	BB200	Earring	Copper alloy
1359	LBA–IrA I	Tomb 306B	306B.3	BB300	Pin	Copper alloy
1360	LBA–IrA I	Tomb 322	322.2	BB500	Bangle (2)	Iron

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1361	LBA–IrA I	Tomb 331	331.4	BB400	Earring	Gold
1362	LBA–IrA I	Tomb 331	331.6	BB400	Ring	Gold
1363	LBA–IrA I	Tomb 331	331.3	BB400	Earring	Gold
1364	LBA–IrA I	Tomb 331	331.5	BB400	Earring	Gold
1365	LBA–IrA I	Tomb 335	335.2	BB700	Bangle	Iron
1366	LBA–IrA I	Tomb 335	335.3	BB700	Bangle	Iron
1367	LBA–IrA I	Tomb 351	351A.5	BB300	Earring	Copper alloy
1368	LBA–IrA I	Tomb 355	355B.1	BB300	Pin	Copper alloy
1369	LBA–IrA I	Tomb 355	355B.4	BB300	Pin	Copper alloy
1370	LBA–IrA I	Tomb 355	355B.2ii	BB300	Earring	Copper alloy
1371	LBA–IrA I	Tomb 355	355B.3	BB300	Earring	Copper alloy
1372	LBA–IrA I	Tomb 355	355B.2i	BB300	Earring	Copper alloy
1373	LBA–IrA I	Tomb 355	355B.6	BB300	Ring	Iron
1374	LBA–IrA I	Tomb 359	359A.3	BB500	Bangle	Iron
1375	LBA–IrA I	Tomb 359	359A.2	BB500	Bangle	Iron
1376	LBA–IrA IIA	Tomb 367	367.2	BB700	Bangle	Copper alloy
1377	LBA–IrA IIA	Tomb 367	367.3	BB700	Bangle	Copper alloy
1378	LBA–IrA IIA	Tomb 367	367.4	BB700	Bangle	Copper alloy
1379	LBA–IrA I	Tomb 379A	379.4	BB100	Bangle	Iron
1380	LBA–IrA I	Tomb 389	389.3	BB500	Ring	Silver
1381	LBA–IrA I	Tomb 390	390.1	BB300	Earring	Copper alloy
1382	LBA–IrA IIA	Tomb 416	416.1	BB1000	Bangle	Copper alloy
1383	LBA–IrA IIA	Tomb 420	420.1	BB1000	Pin	Copper alloy
1384	LBA–IrA IIA	Tomb 425	425.1	BB700/1000/900	Bangle	Iron
1385	LBA–IrA I	Tomb 429A	429A.2	BB1100	Bangle	Iron
1386	LBA–IrA I	Tomb 459A	459.6	BB1200	Ring	Copper alloy
1387	LBA–IrA I	Tomb 459A	459.7	BB1200	Ring	Copper alloy
1388	LBA–IrA I	Tomb 459	459.5	BB1200	Ring	Copper alloy
1389	LBA–IrA I	Tomb 459B	459.4	BB1200	Bangle (2)	Copper alloy
1390	LBA–IrA IIA	Tomb 461	461.1	BB1100	Earring	Copper alloy
1391	LBA–IrA IIA	Tomb 461	461.2	BB1100	Earring	Copper alloy
1392	LBA–IrA IIA	Tomb 478	478.3	BB1300	Earring	Silver
1393	IrA I	Tomb 33A	33.5a	BB400	Bangle	Copper alloy
1394	IrA I	Tomb 33A	33.5b	BB400	Bangle	Iron
1395	IrA I	Tomb 33A	33.6i	BB400	Earring	Copper alloy
1396	IrA I	Tomb 33A	33.6ii	BB400	Earring	Copper alloy
1397	IrA I	Tomb 33A	33.6iii	BB400	Earring	Copper alloy
1398	IrA I	Tomb 33A	33.6iv	BB400	Earring	Copper alloy
1399	IrA I	Tomb 101	101.20	Lower tell	Bead (70)	Electrum
1400	IrA I	Tomb 321	321.2	BB500	Earring	Silver

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1401	IrA I	Tomb 321	321.5	BB500	Earring	Copper alloy
1402	IrA I	Tomb 372	372.1	BB500	Bangle	Copper alloy
1403	IrA I	Tomb 376	376.2	BB300	Pin	Copper alloy
1404	IrA I–IIA	Tomb 3A	3	BB400	Bangle	Iron
1405	IrA I–IIA	Tomb 35	35.1	BB400	Bangle	Copper alloy
1406	IrA I–IIA	Tomb 63	63.4	BB400	Bangle	Copper alloy
1407	IrA I–IIA	Tomb 63	63.5	BB400	Bangle	Copper alloy
1408	IrA I–IIA	Tomb 63	63.6	BB400	Bangle	Copper alloy
1409	IrA I–IIA	Tomb 63	63.6ii	BB400	Bangle	Copper alloy
1410	IrA I–IIA	Tomb 63	63.7	BB400	Bangle	Copper alloy
1411	IrA I–IIA	Tomb 63	63.7ii	BB400	Bangle	Copper alloy
1412	IrA I–IIA	Tomb 92	92.1	BB100	Bangle	Copper alloy
1413	IrA I–IIA	Tomb 92	92.2	BB100	Bangle	Copper alloy
1414	IrA I–IIA	Tomb 123	123.14ii	Lower tell	Bangle	Copper alloy
1415	IrA I–IIA	Tomb 123	123.15	Lower tell	Bangle	Copper alloy
1416	IrA I–IIA	Tomb 123	123.15ii	Lower tell	Bangle	Copper alloy
1417	IrA I–IIA	Tomb 123	123.13	Lower tell	Bangle	Copper alloy
1418	IrA I–IIA	Tomb 123	123.16	Lower tell	Ring	Copper alloy
1419	IrA I–IIA	Tomb 123	123.16ii	Lower tell	Ring	Copper alloy
1420	IrA I–IIA	Tomb 123	123.14	Lower tell	Bangle	Copper alloy
1421	IrA I–IIA	Tomb 136	136B.13	Lower tell	Ring	Copper alloy
1422	IrA I–IIA	Tomb 153B	153B.1	BB400	Bangle	Copper alloy
1423	IrA I–IIA	Tomb 153B	153B.2	BB400	Ring (6)	Copper alloy
1424	IrA I–IIA	Tomb 153B	153B.3	BB400	Ring (2)	Copper alloy
1425	IrA I–IIA	Tomb 161B	161.4	BB100	Bangle	Copper alloy
1426	IrA I–IIA	Tomb 161B	161.3	BB100	Bangle	Copper alloy
1427	IrA I–IIA	Tomb 172	172.2	BB100	Bangle	Iron
1428	IrA I–IIA	Tomb 176	176.3	BB200	Bangle	Copper alloy
1429	IrA I–IIA	Tomb 176	176.4	BB200	Bangle	Copper alloy
1430	IrA I–IIA	Tomb 176	176.2	BB200	Bangle	Copper alloy
1431	IrA I–IIA	Tomb 218A	218A.6	BB100	Bangle	Copper alloy
1432	IrA I–IIA	Tomb 218B	218B.2	BB100	Bangle	Copper alloy
1433	IrA I–IIA	Tomb 218B	218B.3	BB100	Bangle	Copper alloy
1434	IrA I–IIA	Tomb 293	293.3	BB100	Bangle	Copper alloy
1435	IrA I–IIA	Tomb 293	293.4	BB100	Bangle	Copper alloy
1436	IrA I–IIA	Tomb 298A	298A.2	BB600	Bangle	Copper alloy
1437	IrA I–IIA	Tomb 300A	300A.2	BB300	Bangle	Copper alloy
1438	IrA I–IIA	Tomb 300B	300A.3	BB300	Bangle	Copper alloy
1439	IrA I–IIA	Tomb 358A	358A.1	BB500	Earring	Copper alloy
1440	IrA I–IIA	Tomb 403	403.1	BB800	Bangle	Copper alloy
1441	IrA I–IIA	Tomb 403	403.3	BB800	Bangle	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1442	IrA I–IIA	Tomb 411	411.2	BB900	Bangle	Copper alloy
1443	IrA I–IIA	Tomb 411	411.1	BB900	Bangle	Copper alloy
1444	IrA I–IIA	Tomb 510	510.2	BB1400	Bangle	Copper alloy
1445	IrA I–IIA	Tomb 510	510.3	BB1400	Bangle	Copper alloy
1446	IrA IIA	Tomb 40	40.1	BB200	Bangle	Iron
1447	IrA IIA	Tomb 40	40.2	BB200	Bangle	Iron
1448	IrA IIA	Tomb 40	40.3	BB200	Bangle	Iron
1449	IrA IIA	Tomb 40	40.4	BB200	Earring	Copper alloy
1450	IrA IIA	Tomb 61A	61.2	BB600	Bangle	Iron
1451	IrA IIA	Tomb 61A	61.4	BB600	Earring	Silver
1452	IrA IIA	Tomb 76	76A.1	BB400	Earring	Copper alloy
1453	IrA IIA	Tomb 247	247.2	BB300	Bangle	Copper alloy
1454	IrA IIA	Tomb 247	247.3	BB300	Bangle	Copper alloy
1455	IrA IIA	Tomb 248	248.1	BB300	Ring	Copper alloy
1456	IrA IIA	Tomb 255	255.1	BB300	Bangle	Copper alloy
1457	IrA IIA	Tomb 255	255.2	BB300	Bangle	Iron
1458	IrA IIA	Tomb 346	346.1	BB300	Earring	Copper alloy

Tawilan

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1459	IrA I–IIA	Hoard near burial XXV	2	Area II	Earring	Gold
1460	IrA I–IIA	Hoard near burial XXV	3	Area II	Earring	Gold
1461	IrA I–IIA	Hoard near burial XXV	1	Area II	Earring	Gold
1462	IrA IIA	Hoard near burial XXV	7	Area II	Bead	Gold
1463	IrA IIA	Hoard near burial XXV	8	Area II	Bead	Gold
1464	IrA IIA	Hoard near burial XXV	9	Area II	Bead	Gold
1465	IrA I–IIA	Hoard near burial XXV	4	Area II	Earring	Gold
1466	IrA IIA	Hoard near burial XXV	5	Area II	Earring	Gold
1467	IrA IIA	Hoard near burial XXV	6	Area II	Earring	Gold
1468	IrA IIA	Hoard near burial XXV	10	Area II	Earring	Gold
1469	IrA IIA	Hoard near burial XXV	11	Area II	Earring	Gold
1470	IrA IIA	Hoard near burial XXV	12	Area II	Earring	Gold
1471	IrA IIA	Hoard near burial XXV	13	Area II	Earring	Gold
1472	IrA IIA	Hoard near burial XXV	14	Area II	Earring	Gold
1473	IrA IIA	Hoard near burial XXV	15	Area II	Earring	Gold
1474	IrA IIA	Hoard near burial XXV	16	Area II	Pendant	Gold
1475	IrA IIA	Hoard near burial XXV	17	Area II	Bead	Gold
1476	IrA IIA	Hoard near burial XXV	18	Area II	Bead	Gold
1477	IrA IIA	Hoard near burial XXV	19	Area II	Bead	Gold
1478	IrA IIA	Hoard near burial XXV	20	Area II	Bead	Gold

AEGEAN

KERAMEIKOS

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1479	SMyc	SM 2	M274	Pompeion	Fibula	Copper alloy
1480	SMyc	SM 15	M146	Pompeion	Ring	Copper alloy
1481	SMyc	SM 15	M277	Pompeion	Ring	Copper alloy
1482	SMyc	SM 8/I	N. No.	Pompeion	Hair spiral	Gold
1483	SMyc	SM 27	M283	Pompeion	Ring	Copper alloy
1484	SMyc	SM 27	M284	Pompeion	Ring	Copper alloy
1485	SMyc	SM 27	M285	Pompeion	Ring	Copper alloy
1486	SMyc	SM 27	N. No.	Pompeion	Pin	Copper alloy
1487	SMyc	SM 27	N. No.	Pompeion	Fibula	Copper alloy
1488a	SMyc	SM 27	M280	Pompeion	Fibula	Copper alloy
1488b	SMyc	SM 27	M280	Pompeion	Fibula	Copper alloy
1488c	SMyc	SM 27	M280	Pompeion	Fibula	Copper alloy
1488d	SMyc	SM 27	M280	Pompeion	Fibula	Copper alloy
1488e	SMyc	SM 27	M280	Pompeion	Fibula	Copper alloy
1491	SMyc	SM 27	M282	Pompeion	Ring	Copper alloy
1492	SMyc	SM 27	M281	Pompeion	Fibula	Copper alloy
1493	SMyc	SM 27	M152	Pompeion	Ring	Copper alloy
1494	SMyc	SM 27	M153	Pompeion	Ring	Copper alloy
1495	SMyc	SM 27	M276	Pompeion	Pin	Copper alloy
1496	SMyc	SM 27	M276	Pompeion	Pin	Copper alloy
1497	SMyc	SM 27	M154	Pompeion	Ring	Copper alloy
1498	SMyc	SM 27	M275	Pompeion	Fibula	Copper alloy
1499	SMyc	SM 27	M279	Pompeion	Pin	Copper alloy
1500	SMyc	SM 27	M279	Pompeion	Fibula	Copper alloy
1501	SMyc	SM 35	M157	Pompeion	Ring	Copper alloy
1502	SMyc	SM 35	M158	Pompeion	Ring	Copper alloy
1503	SMyc	SM 36	M250	Pompeion	Ring	Copper alloy
1504	SMyc	SM 36	M251	Pompeion	Ring	Iron
1505	SMyc	SM 36	M252	Pompeion	Ring	Copper alloy
1506	SMyc	SM 38	M254	Pompeion	Ring	Copper alloy
1507	SMyc	SM 38	M7	Pompeion	Pin	Iron
1508	SMyc	SM 38	M6	Pompeion	Pin	Iron
1509	SMyc	SM 39	M24	Pompeion	Ring	Copper alloy
1510	SMyc	SM 39	M25	Pompeion	Ring	Copper alloy
1511	SMyc	SM 39	M26	Pompeion	Ring	Copper alloy
1512	SMyc	SM 39	M27	Pompeion	Pin	Iron
1513	SMyc	SM 39	M28	Pompeion	Pin	Iron
1514	SMyc	SM 39	M255	Pompeion	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1516	SMyc	SM 39	M22	Pompeion	Fibula	Copper alloy
1517	SMyc	SM 39	M21	Pompeion	Fibula	Iron
1518	SMyc	SM 39	M23	Pompeion	Fibula	Copper alloy
1519	SMyc	SM 40	M11	Pompeion	Fibula	Copper alloy
1520	SMyc	SM 42	M166-168	Pompeion	Ring	Copper alloy
1521	SMyc	SM 42	M166-168	Pompeion	Ring	Copper alloy
1522	SMyc	SM 42	M166-168	Pompeion	Ring	Copper alloy
1523	SMyc	SM 42	M159	Pompeion	Fibula	Copper alloy
1524	SMyc	SM 42	M165	Pompeion	Ring	Copper alloy
1525	SMyc	SM 42	M200	Pompeion	Ring	Copper alloy
1526	SMyc	SM 42	M201	Pompeion	Ring	Copper alloy
1527	SMyc	SM 43	M256	Pompeion	Ring	Copper alloy
1528	SMyc	SM 43	M257	Pompeion	Ring	Copper alloy
1529	SMyc	SM 44	M171	Pompeion	Ring	Iron
1530	SMyc	SM 47	M186	Pompeion	Ring	Copper alloy
1531	SMyc	SM 47	M163	Pompeion	Fibula	Copper alloy
1532	SMyc	SM 47	M187	Pompeion	Ring	Copper alloy
1533	SMyc	SM 48	M3	Pompeion	Fibula	Copper alloy
1534	SMyc	SM 48	M2	Pompeion	Fibula	Iron
1535	SMyc	SM 52	M191	Pompeion	Ring	Copper alloy
1536	SMyc	SM 52	M192	Pompeion	Ring	Copper alloy
1537	SMyc	SM 52	M193	Pompeion	Ring	Copper alloy
1538	SMyc	SM 53	M294	Pompeion	Pin	Copper alloy
1539	SMyc	SM 70	M204	Pompeion	Ring	Copper alloy
1540	SMyc	SM 70	M208	Pompeion	Ring	Copper alloy
1541a	SMyc	SM 70	M211-212	Pompeion	Ring	Copper alloy
1541b	SMyc	SM 70	M211-212	Pompeion	Ring	Copper alloy
1542	SMyc	SM 70	M205	Pompeion	Fibula	Copper alloy
1543	SMyc	SM 70	M206	Pompeion	Fibula	Copper alloy
1544	SMyc	SM 83	M220	Pompeion	Hair spiral	Copper alloy
1545	SMyc	SM 83	M218	Pompeion	Ring	Iron
1546a	SMyc	SM 83	M219	Pompeion	Ring	Iron
1546b	SMyc	SM 83	M219	Pompeion	Ring	Iron
1547	SMyc	SM 84	M221	Pompeion	Ring	Iron
1548	SMyc	SM 99	M231	Pompeion	Ring	Iron
1549	SMyc	SM 108	N.I.	Pompeion	Fibula (2)	Copper alloy
1550	SMyc	SM 108	M234-249	Pompeion	Ring	Copper alloy
1551	SMyc	SM 108	M234-249	Pompeion	Ring	Copper alloy
1552	SMyc	SM 108	M234-249	Pompeion	Ring	Copper alloy
1553	SMyc	SM 108	M234-249	Pompeion	Ring	Copper alloy
1554	SMyc	SM 108	M234-249	Pompeion	Ring	Copper alloy
1555	SMyc	SM 108	M236	Pompeion	Fibula	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1556	SMyc	SM 108	M234	Pompeion	Fibula	Copper alloy
1557	SMyc	SM 108	M234-249	Pompeion	Pin	Copper alloy
1558	SMyc	SM 108	M234-249	Pompeion	Ring	Copper alloy
1559	SMyc	SM 108	N. No.	Pompeion	Ring	Iron
1560	SMyc	SM 108	N. No.	Pompeion	Ring	Iron
1561	SMyc	SM 108	N. No.	Pompeion	Ring	Copper alloy
1562	SMyc	SM 108	N. No.	Pompeion	Ring	Iron
1563	SMyc	SM 108	N. No.	Pompeion	Ring	Copper alloy
1564	SMyc	SM 108	N. No.	Pompeion	Ring	Copper alloy
1565	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1566	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1567	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1568	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1569	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1570	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1571	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1572	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1573	SMyc	SM 108	N. No.	Pompeion	Fibula	Copper alloy
1574	SMyc	SM 108	N. No.	Pompeion	Ring	Copper alloy
1575	SMyc	SM 136	3900b	Pompeion	Ring	Iron
1576	SMyc	SM 136	3899b	Pompeion	Fibula	Copper alloy
1577	SMyc	SM 136	3900a	Pompeion	Ring	Iron
1578	SMyc	SM 136	3899a	Pompeion	Fibula	Copper alloy
1579	SMyc	SM 136	3900c	Pompeion	Ring	Copper alloy
1580	SMyc	SM 136	3900d	Pompeion	Ring	Copper alloy
1581	SMyc	SM 136	3900f	Pompeion	Ring	Copper alloy
1582	SMyc	SM 136	3900e	Pompeion	Ring	Copper alloy
1583	SMyc	SM 136	N. No.	Pompeion	Ring	Copper alloy
1584	SMyc	SM 136	N. No.	Pompeion	Ring	Copper alloy
1585	SMyc	SM 136	N. No.	Pompeion	Ring	Iron
1586	SMyc	SM 136	3901	Pompeion	Hair spiral	Gold
1587	SMyc	SM 136	3906	Pompeion	Bead (135)	Gold
1588	SMyc	SM N141	M287a	Pompeion	Ring	Copper alloy
1589	SMyc	SM N141	M287b	Pompeion	Ring	Copper alloy
1590	SMyc	SM N141	M288	Pompeion	Hair spiral	Gold
1591	SMyc	SM N143	M58	Pompeion	Fibula	Copper alloy
1592	SMyc	SM N143	M60	Pompeion	Ring	Copper alloy
1593	SMyc–EPG	PG 22	N. No.	Precinct XX	Diadem	Gold
1594	SMyc–EPG	PG 22	N. No.	Precinct XX	Hair spiral	Gold
1595	SMyc–EPG	PG 22	N. No.	Precinct XX	Hair spiral	Gold
1596	SMyc–EPG	PG 22	N. No.	Precinct XX	Ring	Gold
1597	SMyc–EPG	PG 22	N. No.	Precinct XX	Ring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1598	SMyc–EPG	PG 22	N. No.	Precinct XX	Ring	Gold
1599	SMyc–EPG	PG 22	N. No.	Precinct XX	Hair spiral	Gold
1600	SMyc–EPG	PG 22	N. No.	Precinct XX	Hair spiral	Gold
1601	SMyc–EPG	PG 22	N. No.	Precinct XX	Hair spiral	Gold
1602	SMyc–EPG	PG 22	N. No.	Precinct XX	Ring	Gold
1603	SMyc–EPG	PG 24	M264	Precinct XX	Fibula	Copper alloy
1604	SMyc–EPG	PG 24	M265	Precinct XX	Ring	Copper alloy
1605	SMyc–EPG	PG 24	M266	Precinct XX	Ring	Copper alloy
1606	SMyc–EPG	PG 24	M267	Precinct XX	Ring	Copper alloy
1607	SMyc–EPG	PG 22	N. No.	Precinct XX	Hair spiral	Gold
1608	SMyc–EPG	PG 22	N. No.	Precinct XX	Hair spiral	Gold

Knossos North Cemetery

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1609	SM	Tomb 25 SW	25.f10	Medical Faculty	Pin	Copper alloy
1610	SM	Tomb 25 SW	25.f13	Medical Faculty	Fibula	Copper alloy
1611	SM	Tomb 26 SE	26.f2	Medical Faculty	Ring	Copper alloy
1612	SM	Tomb 26 SE	26.f3	Medical Faculty	Pin	Copper alloy
1613	SM	Tomb 26 SE	26.f5	Medical Faculty	Pin	Silver
1614	SM	Tomb 26 SE	26.f10	Medical Faculty	Pin	Copper alloy
1615	SM	Tomb 26 SE	26.f11	Medical Faculty	Pin	Copper alloy
1616	SM	Tomb 26 SE	26.f1	Medical Faculty	Ring	Copper alloy
1617	SM	Tomb 40	40.f2	Medical Faculty	Plaque (2)	Electrum
1618	SM	Tomb 40	40.f12, 13	Medical Faculty	Fibula	Iron
1619	SM	Tomb 40	40.f5	Medical Faculty	Ring	Iron
1620	SM	Tomb 40	40.f17	Medical Faculty	Fibula	Iron
1621	SM	Tomb 121 SE	121.f1	Medical Faculty	Fibula	Iron
1622	SM	Tomb 121 SE	121.f2	Medical Faculty	Fibula	Copper alloy
1623	SM	Tomb 200	200.f10	Medical Faculty	Ring	Gold
1624	SM	Tomb 200	200.f8	Medical Faculty	Bead (81)	Gold
1625	SM	Tomb 200	200.f3	Medical Faculty	Plaque (2)	Electrum
1626a	SM	Tomb 201	201.f11	Medical Faculty	Pin	Iron
1626b	SM	Tomb 201	201.f11	Medical Faculty	Pin	Iron
1627	SM	Tomb 201	201.f20	Medical Faculty	Pin	Iron
1628	SM	Tomb 201	201.f10	Medical Faculty	Ring	Gold
1629	SM	Tomb Q	Q.f9	Tekke	Ring	Gold
1630	EPG	Tomb J	J.f4	Tekke	Pin	Gold
1631	EPG	Tomb J	J.f3	Tekke	Pin	Silver
1632	EPG	Tomb J	J.f7	Tekke	Pin	Gold

LEFKANDI

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1633	SMyc	Tomb 15B	15.2	Skoubris	Fibula	Copper alloy
1634	SMyc	Tomb 15B	15.3	Skoubris	Fibula	Copper alloy
1635	SMyc	Tomb 15B	15.4	Skoubris	Fibula	Copper alloy
1636	SMyc	Tomb 15B	15.5	Skoubris	Fibula	Copper alloy
1637	SMyc	Tomb 15B	15.6	Skoubris	Ring	Copper alloy
1638	SMyc	Tomb 15B	15.6a	Skoubris	Pendant	Copper alloy
1639	SMyc	Tomb 17	17.2	Skoubris	Ring	Copper alloy
1640	SMyc	Tomb 17	17.3	Skoubris	Ring	Copper alloy
1641	SMyc	Tomb 19	19.10	Skoubris	Fibula	Copper alloy
1642	SMyc	Tomb 19	19.11	Skoubris	Fibula	Copper alloy
1643	SMyc	Tomb 19	19.12	Skoubris	Fibula	Copper alloy
1644	SMyc	Tomb 19	19.9	Skoubris	Earring	Copper alloy
1645	SMyc	Tomb 19	19.14	Skoubris	Ring	Copper alloy
1646	SMyc	Tomb 19	19.15	Skoubris	Ring	Copper alloy
1647	SMyc	Tomb 22	22.2	Skoubris	Fibula	Gold
1648	SMyc	Tomb 22	22.3	Skoubris	Fibula	Gold
1649	SMyc	Tomb 22	22.4	Skoubris	Fibula	Copper alloy
1650	SMyc	Tomb 22	22.5	Skoubris	Ring	Copper alloy
1651	SMyc	Tomb 22	22.6	Skoubris	Ring	Copper alloy
1652	SMyc	Tomb 22	22.7	Skoubris	Fibula	Copper alloy
1653	SMyc	Tomb 22	22.8	Skoubris	Fibula	Copper alloy
1654	SMyc	Tomb 32	32.7	Skoubris	Ring	Copper alloy
1655	SMyc	Tomb 32	32.8	Skoubris	Fibula	Iron
1656	SMyc	Tomb 36	36.1	Skoubris	Pin	Copper alloy
1657	SMyc	Tomb 38	38.4	Skoubris	Hair spiral	Gold
1658	SMyc	Tomb 38	38.5	Skoubris	Hair spiral	Gold
1659	SMyc	Tomb 38	38.6	Skoubris	Pin	Copper alloy
1660	SMyc	Tomb 38	38.7	Skoubris	Pin	Copper alloy
1661	SMyc	Tomb 38	38.8	Skoubris	Fibula	Copper alloy
1662	SMyc	Tomb 38	38.9	Skoubris	Fibula	Copper alloy
1663	SMyc	Tomb 38	38.11	Skoubris	Pin	Iron
1664	SMyc	Tomb 38	38.12	Skoubris	Pin	Iron
1665	SMyc	Tomb 38	38.10	Skoubris	Ring	Copper alloy
1666	SMyc	Tomb 40	40.4	Skoubris	Fibula	Copper alloy
1667	SMyc	Tomb 40	40.5	Skoubris	Fibula	Copper alloy
1668	SMyc	Tomb 40	40.6	Skoubris	Fibula	Copper alloy
1669	SMyc	Tomb 40	40.7	Skoubris	Ring	Copper alloy
1670	SMyc	Tomb 40	40.8	Skoubris	Ring	Copper alloy
1671	SMyc	Tomb 40	40.9	Skoubris	Ring	Copper alloy
1672	SMyc	Tomb 43	43.5	Skoubris	Fibula	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1673	SMyc	Tomb 43	43.6	Skoubris	Fibula	Copper alloy
1674	SMyc	Tomb 43	43.7	Skoubris	Fibula	Copper alloy
1675	SMyc	Tomb 53	53.2	Skoubris	Ring	Copper alloy
1676	SMyc	Tomb 60	60.4	Skoubris	Fibula	Copper alloy
1677	SMyc	Tomb 62	62.2	Skoubris	Pin	Copper alloy
1678	SMyc	Tomb 62	62.3	Skoubris	Pin	Copper alloy
1679	SMyc	Tomb 63	63.1	Skoubris	Pin	Copper alloy
1680	SMyc	Tomb 63	63.2	Skoubris	Pin	Copper alloy
1681	SMyc	Tomb 63	63.3	Skoubris	Fibula	Copper alloy
1682	SMyc	Tomb 63	63.4	Skoubris	Fibula	Copper alloy
1683	EPG	Tomb 8	8.6	Skoubris	Fibula	Copper alloy
1684	EPG	Tomb 8	8.5	Skoubris	Fibula	Copper alloy
1685	EPG	Tomb 10	10.7	Skoubris	Fibula	Gold
1686	EPG	Tomb 10	10.8	Skoubris	Fibula	Copper alloy
1687	EPG	Tomb 10	10.9	Skoubris	Fibula	Copper alloy
1688	EPG	Tomb 10	10.10	Skoubris	Fibula	Copper alloy
1689	EPG	Tomb 10	10.11	Skoubris	Pin	Iron
1690	EPG	Tomb 10	10.12	Skoubris	Pin	Iron
1691	EPG	Tomb 10	10.13	Skoubris	Pin	Iron
1692	EPG	Tomb 16	16.14a	Skoubris	Ring	Copper alloy
1693	EPG	Tomb 16	16.15	Skoubris	Ring	Copper alloy
1694	EPG	Tomb 16	16.14b	Skoubris	Ring	Copper alloy
1695	EPG	Tomb 16	16.17	Skoubris	Ring	Copper alloy
1696	EPG	Tomb 16	16.21	Skoubris	Fibula	Copper alloy
1697	EPG	Tomb 16	16.20	Skoubris	Fibula	Copper alloy
1698	EPG	Tomb 16	16.23	Skoubris	Fibula	Copper alloy
1699	EPG	Tomb 16	16.24	Skoubris	Fibula	Copper alloy
1700	EPG	Tomb 16	16.25	Skoubris	Fibula	Copper alloy
1701	EPG	Tomb 16	16.26	Skoubris	Fibula	Copper alloy
1702	EPG	Tomb 16	16.18	Skoubris	Fibula	Copper alloy
1703	EPG	Tomb 16	16.22	Skoubris	Fibula	Copper alloy
1704	EPG	Tomb 16	16.27	Skoubris	Fibula	Copper alloy
1705	EPG	Tomb 16	16.28	Skoubris	Fibula	Copper alloy
1706	EPG	Tomb 16	16.16	Skoubris	Ring	Copper alloy
1707	EPG	Tomb 16	16.19	Skoubris	Fibula	Copper alloy
1708	EPG	Tomb 16	16.30	Skoubris	Fibula	Iron
1709	EPG	Tomb 16	16.29	Skoubris	Pin	Iron
1710	EPG	Tomb 20	20.8	Skoubris	Fibula	Copper alloy
1711	EPG	Tomb 20	20.9	Skoubris	Ring	Copper alloy
1712	EPG	Tomb 31	31.4	Skoubris	Ring	Copper alloy
1713	EPG	Tomb 46	46.4	Skoubris	Fibula	Copper alloy
1714	EPG	Tomb 46	46.5	Skoubris	Fibula	Copper alloy

MARMÁRIANE

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1715	PG	Tomb I	10	Upper slope	Bangle	Copper alloy
1716	PG	Tomb I	8	Upper slope	Bangle	Copper alloy
1717	PG	Tomb I	13	Upper slope	Fibula	Iron
1718	PG	Tomb I or III	N. No.	Upper slope	Ring	Iron
1719	PG	Tomb I or III	N. No.	Upper slope	Ring	Iron
1720	PG	Tomb I or III	N. No.	Upper slope	Ring	Iron
1721	PG	Tomb II	21	Upper slope	Ring	Iron
1722	PG	Tomb II	9	Upper slope	Bangle	Copper alloy
1723	PG	Tomb II	1	Upper slope	Hair spiral	Gold
1724	PG	Tomb II	2	Upper slope	Hair spiral	Gold
1725	PG	Tomb II	3	Upper slope	Hair spiral	Gold
1726	PG	Tomb II	4	Upper slope	Hair spiral	Gold
1727	PG	Tomb II	5	Upper slope	Hair spiral	Gold
1728	PG	Tomb III	17	Mid Slope	Pin	Iron
1729	PG	Tomb V	6	Lower slope	Ring	Copper alloy
1730	PG	Tomb V	15	South of tell	Fibula	Iron
1731	PG	Tomb V	14	South of tell	Fibula	Iron
1732	PG	Tomb VI	18	South of tell	Pin	Iron
1733	PG	Tomb VI	7	South of tell	Ring	Copper alloy
1734	PG	Tomb VI	19	South of tell	Ring	Iron
1735	PG	Tomb VI	20	South of tell	Ring	Iron
1736	PG	Tomb VI	11	South of tell	Fibula	Copper alloy
1737	PG	Tomb VI	N. No.	South of tell	Ring	Iron

PERATI

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1737.001	LH IIIB–C	Tomb 1	M1	Southern slope	Bead (2)	Gold
1737.002	LH IIIB–C	Tomb 1	M2	Southern slope	Ring	Gold
1737.003	LH IIIB–C	Tomb 1	M4	Southern slope	Ring	Gold
1737.004	LH IIIB–C	Tomb 1	M5	Southern slope	Bead (7)	Gold
1737.005	LH IIIB–C	Tomb 1	M8	Southern slope	Bead (2)	Gold
1737.006	LH IIIB–C	Tomb 1	M9	Southern slope	Ring	Gold
1737.007	LH IIIB–C	Tomb 1	M10	Southern slope	Ring	Gold
1737.008	LH IIIB–C	Tomb 1	M11	Southern slope	Ring	Silver
1737.009	LH IIIB–C	Tomb 1	M12	Southern slope	Ring	Silver
1737.010	LH IIIB–C	Tomb 1	Λ3	Southern slope	Bead	Gold
1737.011	LH IIIC	Tomb Σ2	M23	Southern slope	Ring	Gold
1737.012	LH IIIC	Tomb Σ3	Λ27	Southern slope	Bead	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1737.013	LH IIIB–C	Tomb 4	M14α	Southern slope	Ring	Gold
1737.014	LH IIIB–C	Tomb 4	M14β	Southern slope	Bead	Gold
1737.015	LH IIIB–C	Tomb 4	M15	Southern slope	Ring	Copper alloy
1737.016	LH IIIB	Tomb 5	M18	Southern slope	Ring	Gold
1737.017	LH IIIB	Tomb 5	M19α	Southern slope	Bead	Gold
1737.018	LH IIIB	Tomb 5	M19β	Southern slope	Bead	Gold
1737.019	LH IIIC	Tomb Σ1	M20–21	Southern slope	Ring (2)	Gold
1737.020	LH IIIC	Tomb Σ1	M22	Southern slope	Ring	Gold
1737.021	LH IIIB–C	Tomb 8	M28	Southern slope	Ring	Silver
1737.022	LH IIIB–C	Tomb 8	M29	Southern slope	Ring	Silver
1737.023	LH IIIB–C	Tomb 8	M30	Southern slope	Ring	Silver
1737.024	LH IIIB–C	Tomb 9	M31	Southern slope	Ring	Gold
1737.025	LH IIIB–C	Tomb 9	M32	Southern slope	Earring	Gold
1737.026	LH IIIB–C	Tomb 10	M33	Southern slope	Ring	Silver
1737.027	LH IIIB–C	Tomb 10	M34	Southern slope	Ring	Silver
1737.028	LH IIIB–C	Tomb 10	M35	Southern slope	Ring	Silver
1737.029	LH IIIB–C	Tomb 11	M39	Southern slope	Earring	Gold
1737.030	LH IIIB–C	Tomb 11	M40	Southern slope	Hair spiral	Gold
1737.031	LH IIIB–C	Tomb 11	M41	Southern slope	Bead (5)	Gold
1737.032	LH IIIB–C	Tomb 12	M45	Southern slope	Ring	Silver
1737.033	LH IIIB–C	Tomb 12	M46–48	Southern slope	Ring (3)	Silver
1737.034	LH IIIB–C	Tomb 12	M49–50	Southern slope	Ring (2)	Silver
1737.035	LH IIIB–C	Tomb 12	M51	Southern slope	Ring	Copper alloy
1737.036	LH IIIB–C	Tomb 12	M55	Southern slope	Ring	Copper alloy
1737.037	LH IIIC	Tomb 13	M59	Southern slope	Ring	Silver
1737.038	LH IIIC	Tomb 13	M60	Southern slope	Ring	Silver
1737.039	LH IIIC	Tomb 13	M61	Southern slope	Ring	Gold
1737.040	LH IIIC	Tomb 13	M62	Southern slope	Ring	Gold
1737.041	LH IIIC	Tomb 13	M63	Southern slope	Ring	Gold
1737.042	LH IIIB	Tomb 16	M65	Southern slope	Ring	Gold
1737.043	LH IIIB	Tomb 16	M66	Southern slope	Ring	Silver
1737.044	LH IIIB	Tomb 16	M67	Southern slope	Ring (2)	Silver
1737.045	LH IIIB	Tomb 16	M68	Southern slope	Ring	Silver
1737.046	LH IIIB	Tomb 16	M69	Southern slope	Hair spiral	Gold
1737.047	LH IIIC	Tomb 19	M71	Southern slope	Fibulae	Copper alloy
1737.048	LH IIIB–C	Tomb 25	M74	Southern slope	Ring	Copper alloy
1737.049	LH IIIC	Tomb 32	M77	Southern slope	Hair spiral	Copper alloy
1737.050	LH IIIB–C	Tomb 35	M78	Southern slope	Ring	Gold
1737.051	LH IIIB–C	Tomb 35	M80	Southern slope	Ring	Silver

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1737.052	LH IIIB–C	Tomb 35	M81	Southern slope	Ring	Silver
1737.053	LH IIIC	Tomb 36	M83	Southern slope	Fibulae	Copper alloy
1737.054	LH IIIC	Tomb 38	M87	Southern slope	Bangle	Copper alloy
1737.055	LH IIIC	Tomb 49	M89	Southern slope	Pendant	Gold
1737.056	LH IIIC	Tomb 58	M90	Southern slope	Ring	Copper alloy
1737.057	LH IIIC	Tomb Σ19	M91	Southern slope	Earring	Gold
1737.058	LH IIIC	Tomb Σ20	M92	Southern slope	Ring	Gold
1737.059	LH IIIC	Tomb 60	M93	Southern slope	Ring	Silver
1737.060	LH IIIC	Tomb Σ26	M95	Southern slope	Ring	Gold
1737.061	LH IIIB–C	Tomb 65	M97	Southern slope	Ring	Silver
1737.062	LH IIIB–C	Tomb 65	M102	Southern slope	Bead	Gold
1737.063	LH IIIB–C	Tomb 65	M103	Southern slope	Bead (2)	Gold
1737.064	LH IIIB–C	Tomb 65	M105	Southern slope	Ring	Gold
1737.065	LH IIIB–C	Tomb 65	M106	Southern slope	Ring	Silver
1737.066	LH IIIB–C	Tomb 65	M107	Southern slope	Ring	Silver
1737.067	LH IIIB–C	Tomb 65	M108	Southern slope	Fibulae	Copper alloy
1737.068	LH IIIB–C	Tomb 65	M109	Southern slope	Fibulae	Copper alloy
1737.069	LH IIIB	Tomb 69	M111	Southern slope	Ring	Gold
1737.070	LH IIIC	Tomb 74	M114	Southern slope	Bead (3)	Gold
1737.071	LH IIIC	Tomb 74	M115	Southern slope	Ring	Copper alloy
1737.072	LH IIIC	Tomb 74	M116	Southern slope	Fibulae	Copper alloy
1737.073	LH IIIC	Tomb 74	M117	Southern slope	Fibulae	Copper alloy
1737.074	LH IIIC	Tomb 74	M118	Southern slope	Ring	Copper alloy
1737.075	LH IIIC	Tomb 74	M119	Southern slope	Ring	Copper alloy
1737.076	LH IIIC	Tomb 75	M120	Southern slope	Ring	Silver
1737.077	LH IIIC	Tomb 75	M121	Southern slope	Ring	Silver
1737.078	LH IIIC	Tomb 75	M122	Southern slope	Ring	Silver
1737.079	LH IIIC	Tomb 75	M123	Southern slope	Ring	Silver
1737.080	LH IIIB	Tomb 78	M125	Southern slope	Ring	Silver
1737.081	LH IIIC	Tomb 80	M127	Southern slope	Bangle	Copper alloy
1737.082	LH IIIC	Tomb 83	M130	Southern slope	Hair spiral	Silver
1737.083	LH IIIC	Tomb 92	M132	Southern slope	Hair spiral	Gold
1737.084	LH IIIC	Tomb 92	M133	Southern slope	Ring	Silver
1737.085	LH IIIC	Tomb 92	M134	Southern slope	Ring	Silver
1737.086	LH IIIC	Tomb 93	M135	Southern slope	Ring	Copper alloy
1737.087	LH IIIB	Tomb 98	M138	Southern slope	Ring	Silver
1737.088	LH IIIB	Tomb 98	M139	Southern slope	Ring	Silver
1737.089	LH IIIC	Tomb 106	M142	Southern slope	Ring	Lead
1737.090	LH IIIC	Tomb 108	M143	Southern slope	Ring	Copper alloy
1737.091	LH IIIC	Tomb 112	M147	Southern slope	Ring	Copper alloy
1737.092	LH IIIC	Tomb 122α	M152	Southern slope	Pin	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1737.093	LH IIIB	Tomb 124	M158	Southern slope	Bangle	Copper alloy
1737.094	LH IIIB–C	Tomb 127	M160	Southern slope	Ring	Copper alloy
1737.095	LH IIIC	Tomb 128	M165	Southern slope	Ring	Copper alloy
1737.096	LH IIIC	Tomb 128	M167	Southern slope	Ring	Silver
1737.097	LH IIIC	Tomb 128	M168	Southern slope	Hair spiral	Copper alloy
1737.098	LH IIIC	Tomb 131	M174	Southern slope	Bangle	Copper alloy
1737.099	LH IIIC	Tomb Σ49	M177	Southern slope	Ring	Silver
1737.100	LH IIIC	Tomb Σ51	M178	Southern slope	Ring	Silver
1737.101	LH IIIC	Tomb Σ51	M179	Southern slope	Ring	Silver
1737.102	LH IIIB–C	Tomb 134	M181	Southern slope	Bead (3)	Gold
1737.103	LH IIIC	Tomb 136	M184	Southern slope	Ring	Silver
1737.104	LH IIIC	Tomb 136	M185	Southern slope	Ring	Gold
1737.105	LH IIIC	Tomb 136	M186	Southern slope	Ring	Silver
1737.106	LH IIIC	Tomb 142	M190	Southern slope	Ring	Silver
1737.107	LH IIIC	Tomb 145	M191	Southern slope	Pendant	Gold
1737.108	LH IIIC	Tomb 145	M192	Southern slope	Ring	Silver
1737.109	LH IIIC	Tomb 145	M193	Southern slope	Ring	Silver
1737.110	LH IIIC	Tomb 145	M194	Southern slope	Ring	Silver
1737.111	LH IIIC	Tomb 145	M196	Southern slope	Ring	Silver
1737.112	LH IIIC	Tomb 145	M197	Southern slope	Ring	Gold
1737.113	LH IIIC	Tomb 147	M198	Southern slope	Bead (7)	Gold
1737.114	LH IIIB	Tomb 147	M199	Southern slope	Bead (87)	Gold
1737.115	LH IIIB	Tomb 147	M200	Southern slope	Ring	Silver
1737.116	LH IIIB	Tomb 147	M201	Southern slope	Ring	Silver
1737.117	LH IIIB	Tomb 147	M202	Southern slope	Ring	Silver
1737.118	LH IIIB	Tomb 147	M203	Southern slope	Ring	Silver
1737.119	LH IIIB	Tomb 147	M204	Southern slope	Ring	Silver
1737.120	LH IIIB	Tomb 147	M206	Southern slope	Pendant	Gold
1737.121	LH IIIB	Tomb 147	M207	Southern slope	Pendant	Gold
1737.122	LH IIIB	Tomb 147	M208	Southern slope	Pendant	Gold
1737.123	LH IIIB	Tomb 147	M209	Southern slope	Pendant	Gold
1737.124	LH IIIB	Tomb 147	M210	Southern slope	Fibulae	Copper alloy
1737.125	LH IIIC	Tomb 148	M211	Southern slope	Ring	Copper alloy
1737.126	LH IIIC	Tomb 148	M212	Southern slope	Bead (2)	Gold
1737.127	LH IIIC	Tomb 148	M213	Southern slope	Ring	Copper alloy
1737.128	LH IIIC	Tomb 148	M214	Southern slope	Ring	Copper alloy
1737.129	LH IIIC	Tomb 148	M215	Southern slope	Ring	Copper alloy
1737.130	LH IIIB–C	Tomb 149	M216	Southern slope	Ring	Silver
1737.131	LH IIIB–C	Tomb 149	M217	Southern slope	Ring	Silver
1737.132	LH IIIB–C	Tomb 149	M218	Southern slope	Ring	Copper alloy
1737.133	LH IIIB–C	Tomb 152	M220	Southern slope	Ring	Copper alloy

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1737.134	LH IIIB–C	Tomb 152	M221	Southern slope	Earring	Gold
1737.135	LH IIIB–C	Tomb 152	M222	Southern slope	Bead	Gold
1737.136	LH IIIB–C	Tomb 152	M223	Southern slope	Ring	Silver
1737.137	LH IIIB–C	Tomb 152	M224	Southern slope	Bead	Gold
1737.138	LH IIIB–C	Tomb 152	M225	Southern slope	Hair spiral	Gold
1737.139	LH IIIC	Tomb 153	M226	Southern slope	Ring	Copper alloy
1737.140	LH IIIB–C	Tomb 154	M227	Southern slope	Ring	Gold
1737.141	LH IIIB–C	Tomb 155	M229	Southern slope	Fibulae	Copper alloy
1737.142	LH IIIB–C	Tomb 157	M230	Southern slope	Plaque	Gold
1737.143	LH IIIB–C	Tomb 157	M231	Southern slope	Bead	Gold
1737.144	LH IIIB–C	Tomb 157	M232	Southern slope	Ring	Gold
1737.145	LH IIIB–C	Tomb 157	M233	Southern slope	Ring	Silver
1737.146	LH IIIC	Tomb Σ14	M235	Southern slope	Ring	Gold

SELLOPOULO

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1738	LM IIIA	Tomb 3	N. No.	North of gulley	Plaque (30)	Gold
1739	LM IIIA	Tomb 4, Burial I	J6	South of gulley	Ring	Gold
1740	LM IIIA	Tomb 4, Burial I	J7	South of gulley	Ring	Gold
1741	LM IIIA	Tomb 4, Burial I	J8	South of gulley	Ring	Gold
1742	LM IIIA	Tomb 4, Burial I	J7	South of gulley	Ring	Gold
1743	LM IIIA	Tomb 4, Burial I	J1	South of gulley	Bead	Gold
1744	LM IIIA	Tomb 4, Burial I	J5	South of gulley	Bead (32)	Gold
1745	LM IIIA	Tomb 4, Burial I	J2	South of gulley	Bead (33)	Gold
1746	LM IIIA	Tomb 4, Burial II	J9	South of gulley	Bead (38)	Gold
1747	LM IIIA	T Tomb 4, Burial II	J9	South of gulley	Bead (27)	Gold
1748	LM IIIA	Tomb 4, Burials I and III	N. No.	South of gulley	Plaque (148)	Gold

CYPRUS

ENKOMI

INV #	PERIOD	STRATUM/TOMB #	EXC #[1]	AREA	ITEM TYPE	MATERIAL
1749	LC II–III	Br. Tomb 1	0401.2	Unknown	Earring	Gold
1750	LC II–III	Br. Tomb 1	0401.3	Unknown	Earring	Gold
1751	LC II–III	Br. Tomb 1	0401.10	Unknown	Mouthpiece	Gold

[1] All British Museum excavation numbers below starting in '0401' should be preceded by the excavation year '1897,' and those starting with '0701' should be preceded by '1969.'

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1752	LC II–III	Br. Tomb 1	0401.11	Unknown	Ring	Gold
1753	LC IIA	Fr. Tomb 2	4828	AM	Diadem	Gold
1754	LC IIA	Fr. Tomb 2	4829	AM	Diadem	Gold
1755	LC IIA	Fr. Tomb 2	4830	AM	Diadem	Gold
1756	LC IIA	Fr. Tomb 2	4831	AM	Diadem	Gold
1757	LC IIA	Fr. Tomb 2	4680	AM	Diadem	Gold
1758	LC III	Br. Tomb 2	0401.5	Unknown	Mouthpiece	Gold
1759	LC IB–IIIB	Fr. Tomb 5	4545	AM	Earring	Gold
1760	LC IB–IIIB	Fr. Tomb 5	N. No.	AM	Earring	Gold
1761	LC IB–IIIB	Fr. Tomb 5	N. No.	AO	Ring	Copper alloy
1762	LC IB–IIIB	Fr. Tomb 5	4544	AM	Earring	Gold
1763	LC IB–IIIB	Fr. Tomb 5	N. No.	AO	Ring	Copper alloy
1764	LC IB–IIIB	Fr. Tomb 5	N. No.	AO	Ring (2)	Copper alloy
1765	LC IB–IIIB	Fr. Tomb 5	N. No.	AO	Ring (2)	Copper alloy
1766	LC IB–IIIB	Fr. Tomb 5	4910	AM	Mouthpiece	Gold
1767	LC IB–IIIB	Fr. Tomb 5	4540	AM	Mouthpiece	Gold
1768	LC IB–IIIB	Fr. Tomb 5	4541	AM	Hair spiral	Gold
1769	LC III	Fr. Tomb 6	N. No.	AO	Mouthpiece	Gold
1770	LC III	Fr. Tomb 6	N. No.	AO	Mouthpiece	Gold
1771	LC III	Fr. Tomb 6	N. No.	AO	Mouthpiece	Gold
1772	LC III	Fr. Tomb 6	N. No.	AO	Mouthpiece	Gold
1773	LC III	Fr. Tomb 6	N. No.	AO	Ring	Gold
1783	LC IA–B (IIA?)	Sw. Tomb 8	9	Unknown	Pin	Gold
1784	LC IA–B (IIA?)	Sw. Tomb 8	7	Unknown	Earring	Gold
1785	LC IA–IIC	Cyp. Tomb 10	174	Unknown	Earring	Gold
1786	LC IA–IIC	Cyp. Tomb 10	169	Unknown	Earring	Gold
1787	LC IA–IIC	Cyp. Tomb 10	165	Unknown	Bead (14)	Gold
1789	LC IA–IIC	Cyp. Tomb 10	165	Unknown	Bead	Gold
1790	LC IA–IIC	Cyp. Tomb 10	149	Unknown	Diadem	Gold
1797	LC II–III	Br. Tomb 12	0401.60	Unknown	Bead	Gold
1798	LC II–III	Br. Tomb 12	0401.18	Unknown	Mouthpiece	Gold
1799	LC II–III	Br. Tomb 12	0401.7	Unknown	Hair spiral	Gold
1800	LC III	Fr. Tomb 13	N. No.	AO	Mouthpiece	Gold
1801	LC III	Fr. Tomb 13	N. No.	AO	Earring	Gold
1802	LC IIC	Br. Tomb 14	J 67	Unknown	Earring	Gold
1803	LC IIC	Br. Tomb 14	J 67	Unknown	Earring	Gold
1804	LC IIC	Fr. Tomb 14	N. No.	AO	Earring	Gold
1806	LC III	Fr. Tomb 15	5258a	AM	Earring	Silver
1807	LC III	Fr. Tomb 15	5259b	AM	Earring	Silver
1808	LC III	Fr. Tomb 15	5257	AM	Earring	Silver
1809	LC III	Br. Tomb 15	0401.9	Unknown	Diadem	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1810	LC III	Br. Tomb 15	0401.10	Unknown	Diadem	Gold
1811	LC III	Br. Tomb 15	0401.12	Unknown	Diadem	Gold
1812	LC III	Br. Tomb 15	0401.11	Unknown	Diadem	Gold
1817	LC III	Br. Tomb 16	0401.13	Unknown	Earring	Gold
1818	LC III	Br. Tomb 16	0401.14	Unknown	Earring	Gold
1819	LC III	Br. Tomb 16	0401.15	Unknown	Earring	Gold
1820	LC IB–IIB	Sw. Tomb 17	82	Unknown	Pin	Gold
1822	LC IIC	Sw. Tomb 18	81	Unknown	Mouthpiece	Gold
1823	LC IIC	Sw. Tomb 18	s10	Unknown	Diadem	Gold
1824	LC IIC	Sw. Tomb 18	4	Unknown	Mouthpiece	Gold
1825	LC IIC	Sw. Tomb 18	37	Unknown	Mouthpiece	Gold
1826	LC IIC	Sw. Tomb 18	60	Unknown	Mouthpiece	Gold
1827	LC IIC	Sw. Tomb 18	62	Unknown	Ring	Gold
1828	LC IIC	Sw. Tomb 18	20	Unknown	Bead (10)	Gold
1829	LC IIC	Sw. Tomb 18	20	Unknown	Bead (11)	Gold
1830	LC III	Sw. Tomb 19	M76	Unknown	Earring	Gold
1831	LC III	Sw. Tomb 19	M76	Unknown	Earring	Gold
1832	LC III	Sw. Tomb 19	155	Unknown	Hair spiral	Gold
1833	LC III	Sw. Tomb 19	155	Unknown	Earring	Gold
1834	LC IB–IIB	Br. Tomb 19	0401.77	Unknown	Diadem	Gold
1835	LC IB–IIB	Br. Tomb 19	0401.142	Unknown	Bead	Gold
1836	LC IB–IIB	Br. Tomb 19	0401.62	Unknown	Diadem	Gold
1837	LC IB–IIB	Br. Tomb 19	0401.67	Unknown	Diadem	Gold
1838	LC IB–IIB	Br. Tomb 19	0401.68	Unknown	Diadem	Gold
1839	LC IB–IIB	Br. Tomb 19	0401.69	Unknown	Diadem	Gold
1840	LC IB–IIB	Br. Tomb 19	0401.70	Unknown	Diadem	Gold
1841	LC IB–IIB	Br. Tomb 19	0401.71	Unknown	Diadem	Gold
1842	LC IB–IIB	Br. Tomb 19	0401.73	Unknown	Diadem	Gold
1843	LC IB–IIB	Br. Tomb 19	0401.74	Unknown	Diadem	Gold
1844	LC IB–IIB	Br. Tomb 19	0401.76	Unknown	Diadem	Gold
1845	LC IB–IIB	Br. Tomb 19	0401.78	Unknown	Diadem	Gold
1846	LC IB–IIB	Br. Tomb 19	0401.80	Unknown	Diadem	Gold
1847	LC IB–IIB	Br. Tomb 19	0401.84	Unknown	Diadem	Gold
1848	LC IB–IIB	Br. Tomb 19	0401.85	Unknown	Diadem	Gold
1849	LC IB–IIB	Br. Tomb 19	0401.86	Unknown	Diadem	Gold
1850	LC IB–IIB	Br. Tomb 19	0401.63	Unknown	Mouthpiece	Gold
1851	LC IB–IIB	Br. Tomb 19	0401.64	Unknown	Mouthpiece	Gold
1852	LC IB–IIB	Br. Tomb 19	0401.65	Unknown	Mouthpiece	Gold
1853	LC IB–IIB	Br. Tomb 19	0401.66	Unknown	Diadem	Gold
1854	LC IB–IIB	Br. Tomb 19	0401.72	Unknown	Diadem	Gold
1855	LC IB–IIB	Br. Tomb 19	0401.75	Unknown	Mouthpiece	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1856	LC IB–IIB	Br. Tomb 19	0401.77	Unknown	Diadem	Gold
1857	LC IB–IIB	Br. Tomb 19	0401.77	Unknown	Diadem	Gold
1858	LC IB–IIB	Br. Tomb 19	0401.81	Unknown	Diadem	Gold
1859	LC IB–IIB	Br. Tomb 19	0401.82	Unknown	Mouthpiece	Gold
1860	LC IB–IIB	Br. Tomb 19	0401.83	Unknown	Diadem	Gold
1861	LC IB–IIB	Br. Tomb 19	0401.87	Unknown	Diadem	Gold
1862	LC IB–IIB	Br. Tomb 19	0401.100	Unknown	Pin	Gold
1863	LC IB–IIB	Br. Tomb 19	0401.101	Unknown	Pin	Gold
1864	LC IB–IIB	Br. Tomb 19	0401.102	Unknown	Pin	Gold
1865	LC IB–IIB	Br. Tomb 19	0401.103	Unknown	Pin	Gold
1866	LC IB–IIB	Br. Tomb 19	0401.106	Unknown	Pin	Gold
1867	LC IB–IIB	Br. Tomb 19	0401.107	Unknown	Pin	Gold
1868	LC IB–IIB	Br. Tomb 19	0401.108	Unknown	Pin	Gold
1869	LC IB–IIB	Br. Tomb 19	0401.110	Unknown	Pin	Gold
1870	LC IB–IIB	Br. Tomb 19	0401.113	Unknown	Earring	Gold
1871	LC IB–IIB	Br. Tomb 19	0401.116	Unknown	Earring	Gold
1872	LC IB–IIB	Br. Tomb 19	0401.117	Unknown	Earring	Gold
1873	LC IB–IIB	Br. Tomb 19	0401.118	Unknown	Earring	Gold
1874	LC IB–IIB	Br. Tomb 19	0401.119	Unknown	Earring	Gold
1875	LC IB–IIB	Br. Tomb 19	0401.120	Unknown	Earring	Gold
1876	LC IB–IIB	Br. Tomb 19	0401.121	Unknown	Earring	Gold
1877	LC IB–IIB	Br. Tomb 19	0401.122	Unknown	Earring	Gold
1878	LC IB–IIB	Br. Tomb 19	0401.123	Unknown	Earring	Gold
1879	LC IB–IIB	Br. Tomb 19	0401.125	Unknown	Earring	Gold
1880	LC IB–IIB	Br. Tomb 19	0401.126	Unknown	Earring	Gold
1881	LC IB–IIB	Br. Tomb 19	0401.127	Unknown	Earring	Gold
1882	LC IB–IIB	Br. Tomb 19	0401.128	Unknown	Earring	Gold
1883	LC IB–IIB	Br. Tomb 19	0401.129	Unknown	Earring	Gold
1884	LC IB–IIB	Br. Tomb 19	0401.130	Unknown	Earring	Gold
1885	LC IB–IIB	Br. Tomb 19	0401.131	Unknown	Earring	Gold
1886	LC IB–IIB	Br. Tomb 19	0401.132	Unknown	Earring	Gold
1887	LC IB–IIB	Br. Tomb 19	0401.133	Unknown	Earring	Gold
1888	LC IB–IIB	Br. Tomb 19	0401.134	Unknown	Earring	Gold
1889	LC IB–IIB	Br. Tomb 19	0401.135	Unknown	Earring	Gold
1890a	LC IB–IIB	Br. Tomb 19	0401.136	Unknown	Earring	Gold
1890b	LC IB–IIB	Br. Tomb 19	0401.137	Unknown	Earring	Gold
1891	LC IB–IIB	Br. Tomb 19	0401.138	Unknown	Earring	Gold
1892	LC IB–IIB	Br. Tomb 19	0401.139	Unknown	Earring	Gold
1893	LC IB–IIB	Br. Tomb 19	0401.140	Unknown	Earring	Gold
1894	LC IB–IIB	Br. Tomb 19	0401.141	Unknown	Earring	Gold
1895	LC IB–IIB	Br. Tomb 19	0401.143	Unknown	Earring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1896	LC IB–IIB	Br. Tomb 19	0401.144	Unknown	Earring	Gold
1897	LC IB–IIB	Br. Tomb 19	0401.148	Unknown	Earring	Gold
1898	LC IB–IIB	Br. Tomb 19	0401.149	Unknown	Earring	Gold
1899	LC IB–IIB	Br. Tomb 19	0401.150	Unknown	Earring	Gold
1900	LC IB–IIB	Br. Tomb 19	0401.152	Unknown	Earring	Gold
1901	LC IB–IIB	Br. Tomb 19	0401.153	Unknown	Earring	Gold
1902	LC IB–IIB	Br. Tomb 19	0401.154	Unknown	Earring	Gold
1903	LC IB–IIB	Br. Tomb 19	0401.111	Unknown	Earring	Gold
1904	LC IB–IIB	Br. Tomb 19	0401.112	Unknown	Hair spiral	Gold
1905	LC IB–IIB	Br. Tomb 19	0401.114	Unknown	Hair spiral	Gold
1906	LC IB–IIB	Br. Tomb 19	0401.115	Unknown	Hair spiral	Gold
1907	LC IB–IIB	Br. Tomb 19	0401.124	Unknown	Hair spiral	Gold
1908	LC IB–IIB	Br. Tomb 19	0401.92	Unknown	Ring	Gold
1909	LC IB–IIB	Br. Tomb 19	0401.95	Unknown	Ring	Gold
1913	LC IB–IIB	Br. Tomb 19	0401.88	Unknown	Mouthpiece	Gold
1914	LC IB–IIB	Br. Tomb 19	0401.145	Unknown	Bead (14)	Gold
1914	LC IB–IIB	Br. Tomb 19	0401.145	Unknown	Bead (21)	Gold
1915	LC IB–IIB	Br. Tomb 19	0401.147	Unknown	Bead (12)	Gold
1916	LC IB–IIB	Br. Tomb 19	0401.146	Unknown	Bead	Gold
1916	LC IB–IIB	Br. Tomb 19	0401.146	Unknown	Bead (2)	Gold
1916	LC IB–IIB	Br. Tomb 19	0401.146	Unknown	Bead (16)	Gold
1916	LC IB–IIB	Br. Tomb 19	0401.146	Unknown	Bead (3)	Gold
1916	LC IB–IIB	Br. Tomb 19	0401.146	Unknown	Bead (2)	Gold
1916	LC IB–IIB	Br. Tomb 19	0401.146	Unknown	Bead (2)	Gold
1916	LC IB–IIB	Br. Tomb 19	0401.146	Unknown	Bead	Gold
1917	LC IB–IIB	Br. Tomb 19	0401.151	Unknown	Pendant (14)	Gold
1919	LC IB–IIB	Br. Tomb 19	0401.94	Unknown	Ring	Gold
1920	LC IB–IIB	Br. Tomb 19	0401.104	Unknown	Pin	Gold
1921	LC IB–IIB	Br. Tomb 19	0401.105	Unknown	Pin	Gold
1922	LC IB–IIB	Br. Tomb 19	0401.93	Unknown	Ring	Gold
1923	LC IB–IIB	Br. Tomb 19	0401.1454	Unknown	Bangle	Silver
1924	LC IB–IIB	Br. Tomb 19	0401.1455	Unknown	Bangle	Silver
1927	LC III	Br. Tomb 22	0401.17	Unknown	Diadem	Gold
1928	LC III	Br. Tomb 22	0401.19	Unknown	Diadem	Gold
1929	LC III	Br. Tomb 22	0401.20	Unknown	Diadem	Gold
1930	LC III	Br. Tomb 22	0401.18	Unknown	Earring	Gold
1931	LC III	Br. Tomb 22	0401.16	Unknown	Mouthpiece	Gold
1936	LC III	Br. Tomb 24	0401.21	Unknown	Diadem	Gold
1937	LC III	Br. Tomb 24	0401.22	Unknown	Diadem	Gold
1938	LC III	Br. Tomb 24	0401.24	Unknown	Diadem	Gold
1939	LC III	Br. Tomb 24	0401.25	Unknown	Earring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1940	LC III	Br. Tomb 24	0401.25+	Unknown	Earring	Gold
1941	LC III	Br. Tomb 24	0401.27	Unknown	Earring	Gold
1942	LC III	Br. Tomb 24	0401.28	Unknown	Earring	Gold
1943	LC III	Br. Tomb 24	0401.32	Unknown	Earring	Gold
1944	LC III	Br. Tomb 24	0401.33	Unknown	Earring	Gold
1945	LC III	Br. Tomb 24	0401.34	Unknown	Earring	Gold
1946	LC III	Br. Tomb 24	0401.35	Unknown	Earring	Gold
1947	LC III	Br. Tomb 24	0401.38	Unknown	Earring	Gold
1948	LC III	Br. Tomb 24	0401.30	Unknown	Ring	Gold
1949	LC III	Br. Tomb 24	0401.31	Unknown	Ring	Gold
1950	LC II–III	Br. Tomb 32	0401.41+	Unknown	Bead	Gold
1951	LC II–III	Br. Tomb 32	0401.57	Unknown	Bead	Gold
1952	LC II–III	Br. Tomb 32	J 61	Unknown	Earring	Gold
1953	LC II–III	Br. Tomb 32	J 61	Unknown	Earring	Gold
1954	LC II–III	Br. Tomb 32	J 73	Unknown	Earring	Gold
1955	LC II–III	Br. Tomb 32	0401.44	Unknown	Earring	Gold
1956	LC II–III	Br. Tomb 32	0401.39	Unknown	Hair spiral	Gold
1957	LC II–III	Br. Tomb 32	0401.40	Unknown	Hair spiral	Gold
1958	LC II–III	Br. Tomb 32	0401.43	Unknown	Hair spiral	Gold
1959	LC II–III	Br. Tomb 32	0401.42	Unknown	Pendant	Gold
1960	LC I–III	Fr. Tomb 34	N. No.	AM	Earring	Gold
1961	LC II–III	Br. Tomb 39	0401.167	Unknown	Bead	Gold
1962	LC II–III	Br. Tomb 39	0401.171	Unknown	Earring	Gold
1963	LC II–III	Br. Tomb 39	0401.172	Unknown	Earring	Gold
1964	LC II–III	Br. Tomb 39	0401.173	Unknown	Earring	Gold
1965	LC II–III	Br. Tomb 39	0401.174	Unknown	Earring	Gold
1966	LC II–III	Br. Tomb 39	0401.175	Unknown	Earring	Gold
1967	LC II–III	Br. Tomb 39	0401.168	Unknown	Bead (13)	Gold
1968	LC II–III	Br. Tomb 39	0401.166	Unknown	Pendant	Gold
1969	LC II–III	Br. Tomb 39	0401.170	Unknown	Pendant	Gold
1970	LC II–III	Br. Tomb 40	0401.176	Unknown	Bead	Gold
1971	LC II–III	Br. Tomb 40	0401.177	Unknown	Bead	Gold
1972	LC II–III	Br. Tomb 40	0401.178	Unknown	Earring	Gold
1973	LC II–III	Br. Tomb 41	0401.180	Unknown	Bead	Gold
1974	LC II–III	Br. Tomb 41	0401.179	Unknown	Hair spiral	Gold
1975	LC IIC	Br. Tomb 43	J 26	Unknown	Diadem	Gold
1976	LC IIC	Br. Tomb 43	J 14	Unknown	Diadem	Gold
1977	LC I–II	Br. Tomb 45	0401.183	Unknown	Diadem	Gold
1978	LC I–II	Br. Tomb 45	0401.184	Unknown	Diadem	Gold
1979	LC I–II	Br. Tomb 45	0401.702	Unknown	Mouthpiece	Gold
1980	LC I–II	Br. Tomb 45	0401.706	Unknown	Diadem	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
1981	LC I–II	Br. Tomb 45	0701.37	Unknown	Earring	Gold
1982	LC I–II	Br. Tomb 45	0701.38	Unknown	Earring	Gold
1983	LC I–II	Br. Tomb 45	0701.39	Unknown	Earring	Gold
1984	LC I–II	Br. Tomb 45	0401.182	Unknown	Mouthpiece	Gold
1985	LC I–II	Br. Tomb 45	0401.703	Unknown	Mouthpiece	Gold
1986	LC I–II	Br. Tomb 45	0401.704	Unknown	Mouthpiece	Gold
1987	LC I–II	Br. Tomb 45	0401.705	Unknown	Mouthpiece	Gold
1988	LC II–III	Br. Tomb 46	0401.185	Unknown	Bead	Gold
1989	LC II–III	Br. Tomb 46	0401.186	Unknown	Earring	Gold
1990	LC III	Br. Tomb 47	0401.189+	Unknown	Mouthpiece	Gold
1991	LC III	Br. Tomb 47	0401.187	Unknown	Mouthpiece	Gold
1992	LC III	Br. Tomb 47	0401.188	Unknown	Mouthpiece	Gold
1993	LC II–III	Br. Tomb 53	0401.191	Unknown	Diadem	Gold
1994	LC II–III	Br. Tomb 53	0401.192	Unknown	Mouthpiece	Gold
1995	LC II–III	Br. Tomb 53	0401.193	Unknown	Earring	Gold
1996	LC II–III	Br. Tomb 56	0401.195	Unknown	Diadem	Gold
1997	LC II–III	Br. Tomb 56	0401.196	Unknown	Mouthpiece	Gold
1998	LC II–III	Br. Tomb 57	0401.197	Unknown	Pin	Gold
1999	LC II–III	Br. Tomb 57	0401.206	Unknown	Earring	Gold
2000	LC II–III	Br. Tomb 57	0401.206+	Unknown	Earring	Gold
2001	LC II–III	Br. Tomb 57	0401.207	Unknown	Earring	Gold
2002	LC II–III	Br. Tomb 57	0401.207+	Unknown	Earring	Gold
2003	LC II–III	Br. Tomb 57	0401.208	Unknown	Earring	Gold
2004	LC II–III	Br. Tomb 57	0401.209	Unknown	Earring	Gold
2005	LC II–III	Br. Tomb 57	0401.210	Unknown	Earring	Gold
2006	LC II–III	Br. Tomb 57	0401.211	Unknown	Earring	Gold
2007	LC II–III	Br. Tomb 57	0401.212	Unknown	Earring	Gold
2008	LC II–III	Br. Tomb 57	0401.213	Unknown	Earring	Gold
2009	LC II–III	Br. Tomb 57	0401.214	Unknown	Earring	Gold
2010	LC III	Br. Tomb 58	0401.200	Unknown	Diadem	Gold
2011	LC III	Br. Tomb 58	0401.201	Unknown	Diadem	Gold
2012	LC III	Br. Tomb 58	0401.202	Unknown	Earring	Gold
2013	LC III	Br. Tomb 58	0401.204	Unknown	Earring	Gold
2014	LC III	Br. Tomb 58	0401.205	Unknown	Earring	Gold
2015	LC II–III	Br. Tomb 60	0401.217	Unknown	Bead	Gold
2016	LC II–III	Br. Tomb 60	0401.218	Unknown	Earring	Gold
2017	LC II–III	Br. Tomb 60	0401.215	Unknown	Hair spiral	Gold
2018	LC III	Br. Tomb 61	0401.220	Unknown	Diadem	Gold
2019	LC III	Br. Tomb 61	0401.228	Unknown	Diadem	Gold
2020	LC III	Br. Tomb 61	0401.230	Unknown	Diadem	Gold
2021	LC III	Br. Tomb 61	0401.232	Unknown	Diadem	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2022	LC III	Br. Tomb 61	0401.221	Unknown	Mouthpiece	Gold
2023	LC III	Br. Tomb 61	0401.231	Unknown	Mouthpiece	Gold
2024	LC III	Br. Tomb 61	0401.234	Unknown	Earring	Gold
2025	LC III	Br. Tomb 61	0401.235	Unknown	Earring	Gold
2026	LC III	Br. Tomb 61	0401.236	Unknown	Earring	Gold
2027	LC III	Br. Tomb 61	0401.237	Unknown	Earring	Gold
2028	LC III	Br. Tomb 61	0401.238	Unknown	Earring	Gold
2029	LC III	Br. Tomb 61	0401.239	Unknown	Earring	Gold
2030	LC III	Br. Tomb 61	0401.240	Unknown	Earring	Gold
2031	LC III	Br. Tomb 61	0401.241	Unknown	Earring	Gold
2032	LC I–III	Fr. Tomb 415	N. No.	AM	Earring	Gold
2033	LC III	Br. Tomb 61	0401.242	Unknown	Earring	Gold
2034	LC I–III	Fr. Tomb 419	419:41	AO	Ring	Copper alloy
2035	LC III	Br. Tomb 61	0401.243	Unknown	Earring	Gold
2036	LC III	Br. Tomb 61	0401.244	Unknown	Earring	Gold
2037	LC III	Br. Tomb 61	0401.245	Unknown	Earring	Gold
2038	LC III	Br. Tomb 61	0401.246	Unknown	Earring	Gold
2039	LC III	Br. Tomb 61	0401.247	Unknown	Earring	Gold
2040	LC III	Br. Tomb 61	0401.248	Unknown	Earring	Gold
2041	LC III	Br. Tomb 61	0401.249	Unknown	Earring	Gold
2042	LC III	Br. Tomb 61	0401.250	Unknown	Earring	Gold
2043	LC III	Br. Tomb 61	0401.251	Unknown	Earring	Gold
2044	LC III	Br. Tomb 61	0401.223	Unknown	Mouthpiece	Gold
2045	LC II–III	Br. Tomb 62	0401.252	Unknown	Bead	Gold
2046	LC II–III	Br. Tomb 62	0401.253	Unknown	Bead	Gold
2047	LC II–III	Br. Tomb 62	0401.254	Unknown	Bead	Gold
2048	LC II–III	Br. Tomb 62	0401.255	Unknown	Bead	Gold
2049	LC II–III	Br. Tomb 64	0401.257	Unknown	Mouthpiece	Gold
2050	LC II–III	Br. Tomb 65	0401.258	Unknown	Mouthpiece	Gold
2051	LC II–III	Br. Tomb 65	0401.259	Unknown	Ring	Gold
2052	LC IIB–C	Br. Tomb 66	0401.284	Unknown	Bead	Gold
2053	LC IIB–C	Br. Tomb 66	0401.263	Unknown	Diadem	Gold
2054	LC IIB–C	Br. Tomb 66	0401.264	Unknown	Diadem	Gold
2055	LC IIB–C	Br. Tomb 66	0401.268	Unknown	Mouthpiece	Gold
2056	LC IIB–C	Br. Tomb 66	0401.271	Unknown	Diadem	Gold
2057	LC IIB–C	Br. Tomb 66	0401.262	Unknown	Mouthpiece	Gold
2058	LC IIB–C	Br. Tomb 66	0401.265	Unknown	Mouthpiece	Gold
2059	LC IIB–C	Br. Tomb 66	0401.266	Unknown	Mouthpiece	Gold
2060	LC IIB–C	Br. Tomb 66	0401.267	Unknown	Mouthpiece	Gold
2061	LC IIB–C	Br. Tomb 66	0401.269	Unknown	Diadem	Gold
2062	LC IIB–C	Br. Tomb 66	0401.270	Unknown	Diadem	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2063	LC IIB–C	Br. Tomb 66	0401.272	Unknown	Diadem	Gold
2064	LC IIB–C	Br. Tomb 66	0401.285	Unknown	Pin	Gold
2065	LC IIB–C	Br. Tomb 66	0401.274	Unknown	Earring	Gold
2066	LC IIB–C	Br. Tomb 66	0401.275	Unknown	Earring	Gold
2067	LC IIB–C	Br. Tomb 66	0401.287	Unknown	Earring	Gold
2068	LC IIB–C	Br. Tomb 66	0401.288	Unknown	Earring	Gold
2069	LC IIB–C	Br. Tomb 66	0401.289	Unknown	Earring	Gold
2070	LC IIB–C	Br. Tomb 66	0401.290	Unknown	Earring	Gold
2071	LC IIB–C	Br. Tomb 66	0401.291	Unknown	Earring	Gold
2072	LC IIB–C	Br. Tomb 66	0401.292	Unknown	Earring	Gold
2073	LC IIB–C	Br. Tomb 66	0401.293	Unknown	Earring	Gold
2074	LC IIB–C	Br. Tomb 66	0401.294	Unknown	Earring	Gold
2075	LC IIB–C	Br. Tomb 66	0401.295	Unknown	Earring	Gold
2076	LC IIB–C	Br. Tomb 66	0401.296	Unknown	Earring	Gold
2077	LC IIB–C	Br. Tomb 66	0401.297	Unknown	Earring	Gold
2078	LC IIB–C	Br. Tomb 66	0401.298	Unknown	Earring	Gold
2079	LC IIB–C	Br. Tomb 66	0401.277	Unknown	Ring	Gold
2080	LC IIB–C	Br. Tomb 66	0401.279	Unknown	Ring	Gold
2081	LC IIB–C	Br. Tomb 66	0401.279+	Unknown	Ring	Gold
2082	LC IIB–C	Br. Tomb 66	0401.261	Unknown	Mouthpiece	Gold
2083	LC IIB–C	Br. Tomb 66	0401.319	Unknown	Mouthpiece	Gold
2084	LC IIB–C	Br. Tomb 66	0401.280	Unknown	Ring	Gold
2085	LC IIB–C	Br. Tomb 66	0401.281	Unknown	Ring	Gold
2087	LC IIB–C	Br. Tomb 66	0401.276	Unknown	Ring	Gold
2088	LC IIB–C	Br. Tomb 66	0401.286	Unknown	Pin	Gold
2089	LC IB–IIC	Br. Tomb 67	0401.355	Unknown	Ring	Copper alloy
2090	LC IB–IIC	Br. Tomb 67	0401.345	Unknown	Bead (17)	Gold
2091	LC IB–IIC	Br. Tomb 67	0401.345	Unknown	Bead (4)	Gold
2092	LC IB–IIC	Br. Tomb 67	0401.346	Unknown	Bead	Gold
2093	LC IB–IIC	Br. Tomb 67	0401.347	Unknown	Bead	Gold
2094	LC IB–IIC	Br. Tomb 67	0401.374	Unknown	Bead	Gold
2095	LC IB–IIC	Br. Tomb 67	0401.365	Unknown	Diadem	Gold
2096	LC IB–IIC	Br. Tomb 67	0401.366	Unknown	Diadem	Gold
2097	LC IB–IIC	Br. Tomb 67	0401.367	Unknown	Diadem	Gold
2098	LC IB–IIC	Br. Tomb 67	0401.364	Unknown	Mouthpiece	Gold
2099	LC IB–IIC	Br. Tomb 67	0401.348	Unknown	Pin	Gold
2100	LC IB–IIC	Br. Tomb 67	0401.349	Unknown	Pin	Gold
2101	LC IB–IIC	Br. Tomb 67	0401.320	Unknown	Earring	Gold
2102	LC IB–IIC	Br. Tomb 67	0401.321	Unknown	Earring	Gold
2103	LC IB–IIC	Br. Tomb 67	0401.322	Unknown	Earring	Gold
2104	LC IB–IIC	Br. Tomb 67	0401.323	Unknown	Earring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2105	LC IB–IIC	Br. Tomb 67	0401.323+	Unknown	Earring	Gold
2106	LC IB–IIC	Br. Tomb 67	0401.324	Unknown	Earring	Gold
2107	LC IB–IIC	Br. Tomb 67	0401.325	Unknown	Earring	Gold
2108	LC IB–IIC	Br. Tomb 67	0401.326	Unknown	Earring	Gold
2109	LC IB–IIC	Br. Tomb 67	0401.326+	Unknown	Earring	Gold
2110	LC IB–IIC	Br. Tomb 67	0401.327	Unknown	Earring	Gold
2111	LC IB–IIC	Br. Tomb 67	0401.327+	Unknown	Earring	Gold
2112	LC IB–IIC	Br. Tomb 67	0401.328	Unknown	Earring	Gold
2113	LC IB–IIC	Br. Tomb 67	0401.328+	Unknown	Earring	Gold
2114	LC IB–IIC	Br. Tomb 67	0401.340	Unknown	Earring	Gold
2115	LC IB–IIC	Br. Tomb 67	0401.341	Unknown	Earring	Gold
2116	LC IB–IIC	Br. Tomb 67	0401.342	Unknown	Earring	Gold
2117	LC IB–IIC	Br. Tomb 67	0401.343	Unknown	Earring	Gold
2118	LC IB–IIC	Br. Tomb 67	0401.344	Unknown	Earring	Gold
2119	LC IB–IIC	Br. Tomb 67	0401.357	Unknown	Earring	Gold
2120	LC IB–IIC	Br. Tomb 67	0401.329	Unknown	Hair spiral	Gold
2121	LC IB–IIC	Br. Tomb 67	0401.330	Unknown	Earring	Gold
2122	LC IB–IIC	Br. Tomb 67	0401.331	Unknown	Earring	Gold
2123	LC IB–IIC	Br. Tomb 67	0401.332	Unknown	Earring	Gold
2124	LC IB–IIC	Br. Tomb 67	0401.333	Unknown	Earring	Gold
2125	LC IB–IIC	Br. Tomb 67	0401.334	Unknown	Earring	Gold
2126	LC IB–IIC	Br. Tomb 67	0401.335	Unknown	Hair spiral	Gold
2127	LC IB–IIC	Br. Tomb 67	0401.336	Unknown	Hair spiral	Gold
2128	LC IB–IIC	Br. Tomb 67	0401.337	Unknown	Earring	Gold
2129	LC IB–IIC	Br. Tomb 67	0401.338	Unknown	Earring	Gold
2130	LC IB–IIC	Br. Tomb 67	0401.339	Unknown	Earring	Gold
2132	LC IB–IIC	Br. Tomb 67	0401.354	Unknown	Ring	Gold
2133	LC IB–IIC	Br. Tomb 67	0401.358	Unknown	Ring	Gold
2134	LC IB–IIC	Br. Tomb 67	0401.359	Unknown	Ring	Gold
2135	LC IB–IIC	Br. Tomb 67	0401.367+	Unknown	Mouthpiece	Gold
2136	LC IB–IIC	Br. Tomb 67	0401.356	Unknown	Pendant	Gold
2137	LC IB–IIC	Br. Tomb 67	0401.352	Unknown	Ring	Gold
2138	LC I–III	Br. Tomb 76	J 205	Unknown	Earring	Gold
2139	LC II	Br. Tomb 82	J 11	Unknown	Diadem	Gold
2140	LC IIC	Br. Tomb 82	J 13	Unknown	Diadem	Gold
2144	LC III	Fr. Tomb 1	J 506	Unknown	Pendant	Gold
2145	LC IIA	Fr. Tomb 2	4244	AM	Ring	Gold
2146	LC IIA	Fr. Tomb 2	4255.a	AM	Earring	Gold
2147	LC IIA	Fr. Tomb 2	4255.b	AM	Earring	Gold
2148	LC IIA	Fr. Tomb 2	N. No.	AM	Diadem	Gold
2149	LC I–III	Br. N. No.	J 81	Unknown	Pin	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2150	LC IIC	Uncertain tomb	J 97	Unknown	Bead (22)	Gold
2151	LC IIC	Uncertain tomb	J 97	Unknown	Bead (46)	Gold
2152	LC IIC	Uncertain tomb	J 97	Unknown	Bead (21)	Gold
2153	LC I–III	Fr. N. No.	4866	AM	Mouthpiece	Gold
2154	LC I–III	Fr. Tomb 17	17.21	Unknown	Earring	Gold
2155	LC I–III	Fr. N. No.	3764	AM	Bangle	Copper alloy
2156	LC I–III	Fr. N. No.	3763	AM	Bangle	Copper alloy
2157	LC I–III	Fr. N. No.	3773	AM	Bangle	Copper alloy
2158	LC I–III	Fr. N. No.	3770	AM	Bangle	Copper alloy
2159	LC I–III	Fr. N. No.	3772	AM	Bangle	Copper alloy
2160	LC I–III	Fr. N. No.	3773	AM	Bangle	Copper alloy
2161	LC I–III	Fr. N. No.	3773	AM	Bangle	Copper alloy
2162	LC I–III	Fr. N. No.	3782	AM	Bangle	Copper alloy
2163	LC I–III	Fr. N. No.	Inv.25	AM	Ring	Gold
2164	LC I–III	Fr. N. No.	5144	AM	Earring	Gold
2165	LC I–III	Fr. N. No.	N. No.	AM	Diadem	Gold
2166	LC I–III	Fr. N. No.	N. No.	AM	Diadem	Gold
2167	LC I–III	Fr. N. No.	N. No.	AM	Diadem	Gold
2168	LC I–III	Fr. N. No.	N. No.	AM	Mouthpiece	Gold
2169	LC I–III	Fr. N. No.	3755	AM	Bangle	Copper alloy
2170	LC I–III	Fr. N. No.	3758	AM	Bangle	Copper alloy
2171	LC I–III	Fr. N. No.	N. No.	AM	Ring	Silver
2172	LC I–III	Fr. N. No.	N. No.	AM	Bead	Gold
2173	LC I–III	Fr. N. No.	N. No.	AM	Earring	Gold
2174	LC I–III	Fr. N. No.	N. No. (a + b)	AM	Earring (2)	Gold

HALA SULTAN TEKKE

INV #	PERIOD	STRATUM/TOMB #	EXC #[2]	AREA	ITEM TYPE	MATERIAL
2175a	LC IIIA	Grid FFb531	1157a	Hoard, Area 8 East	Bead	Gold
2175b	LC IIIA	Grid FFb531	1157b	Hoard, Area 8 East	Bead	Gold
2175c	LC IIIA	Grid FFb531	1157e	Hoard, Area 8 East	Pendant	Gold
2175d	LC IIIA	Grid FFb531	1157f	Hoard, Area 8 East	Pendant	Gold
2175e	LC IIIA	Grid FFb531	1157g	Hoard, Area 8 East	Pendant	Gold

[2] Excavations numbers starting with '12-' should be preceded by the number of the excavation year, '1898.'

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2175f	LC IIIA	Grid FFb531	1157h	Hoard, Area 8 East	Pendant	Gold
2175g	LC IIIA	Grid FFb531	1157j	Hoard, Area 8 East	Pendant	Gold
2175h	LC IIIA	Grid FFb531	1157k	Hoard, Area 8 East	Pendant	Gold
2175i	LC IIIA	Grid FFb531	1157l	Hoard, Area 8 East	Earring	Gold
2176	LC IIIA	Grid FFb531	1157o	Hoard, Area 8 East	Earring	Gold
2177	LC IIIA	Grid FFb531	1157n	Hoard, Area 8 East	Earring	Gold
2178	LC IIIA	Grid FFb531	1157i	Hoard, Area 8 East	Pendant	Gold
2179	LC IIIA	Grid FFb531	1157m	Hoard, Area 8 East	Ring	Gold
2180	LC II	Kara. Tomb 1	119	West shore	Diadem	Gold
2181	LC II	Kara. Tomb 1	119	West shore	Diadem	Gold
2182	LC IIIA	MLA 1173 (formerly Tomb 1)	MLA 1173.10	Dromolaxia	Earring	Gold
2183	LC IIIA	MLA 1173 (formerly Tomb 1)	MLA 1173.6	Dromolaxia	Pendant	Gold
2184	LC IIIA	MLA 1173 (formerly Tomb 1)	T1/13	Dromolaxia	Diadem	Gold
2186	LC IIIA	MLA 1173 (formerly Tomb 1)	MLA 1173.7	Dromolaxia	Pendant	Gold
2188	LC II–III	Tomb 2	12-1.177	Dromolaxia	Ring	Gold
2189	LC II–III	Tomb 2	12-1.178–9	Dromolaxia	Earring (2)	Gold
2190	LC II–III	Tomb 2	12-1.180	Dromolaxia	Earring	Gold
2191	LC II–III	Tomb 2	12-1.181	Dromolaxia	Earring	Gold
2192	LC II–III	Tomb 2	12-1.182	Dromolaxia	Bead (17)	Gold
2193	LC II–III	Tomb 2	12-1.182	Dromolaxia	Bead (11)	Gold
2194	LC II–III	Tomb 2	12-1.182	Dromolaxia	Bead (3)	Gold
2195	LC II–III	Tomb 2	12-1.182	Dromolaxia	Bead	Gold
2196	LC II–III	Tomb 2	12-1.182	Dromolaxia	Bead	Gold
2197	LC II–III	Tomb 2	12-1.182	Dromolaxia	Pendant	Gold
2198	LC I–III	Possibly Tomb 5	J 53	Dromolaxia	Mouthpiece	Gold
2199	LC I–III	Possibly Tomb 6	J 30	Dromolaxia	Diadem	Gold
2200	LC I–III	Possibly Tomb 6	J 725	Dromolaxia	Earring	Gold
2201	LC IIB	Tomb 6	J 93	Dromolaxia	Bead (6)	Gold
2202	LC IIB	Tomb 6	J 93	Dromolaxia	Bead	Gold
2203	LC IIB	Tomb 6	J 93	Dromolaxia	Bead (2)	Gold
2205	LC IIB	Tomb 6	J 76	Dromolaxia	Earring	Gold
2206	LC II	Possibly Tomb 7	J 59	Dromolaxia	Earring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2207	LC II	Possibly Tomb 7	J 50	Dromolaxia	Earring	Gold
2208	LC II–III	Tomb 8	1231.2	Dromolaxia	Earring	Gold
2209	LC II–III	Tomb 8	1231.1	Dromolaxia	Earring (2)	Gold
2210	LC II–III	Tomb 8	1231.3	Dromolaxia	Diadem	Gold
2211	LC II–III	Tomb 8	1231.4	Dromolaxia	Diadem	Gold
2212	LC II–III	Tomb 8	12-1.185	Dromolaxia	Diadem	Gold
2213	LC II–III	Tomb 8	12-1.187	Dromolaxia	Ring	Gold
2214	LC II–III	Tomb 8	12-1.189	Dromolaxia	Hair spiral	Gold
2215	LC II–III	Tomb 8	12-1.188	Dromolaxia	Hair spiral	Gold
2216	LC II–III	Tomb 8	12-1.190	Dromolaxia	Hair spiral	Gold
2217	LC II–III	Tomb 8	12-1.191	Dromolaxia	Hair spiral	Gold
2218	LC II–III	Tomb 8	12-1.192–193	Dromolaxia	Bead (2)	Gold
2219	LC II–III	Tomb 8	12-1.195	Dromolaxia	Ring	Silver
2220	LC II–III	Tomb 8	12-1.196	Dromolaxia	Ring	Silver
2221	LC II–III	Tomb 8	12-1.186	Dromolaxia	Diadem	Gold
2222	LC III	Tomb 23	1372	Area 8	Earring	Gold
2223	LC III	Tomb 23	1245	Area 8	Bead	Gold
2224	LC III	Tomb 23	1373	Area 8	Bead	Gold
2225	LC III	Tomb 23	1247	Area 8	Pendant	Gold
2226	LC III	Tomb 23	1244	Area 8	Bead	Gold
2227	LC III	Tomb 23	1352	Area 8	Bead	Gold
2228	LC III	Tomb 23	1242	Area 8	Bead	Gold
2229	LC III	Tomb 23	1234	Area 8	Bead	Gold
2230	LC III	Tomb 23	1237	Area 8	Bead	Gold
2231	LC III	Tomb 23	1351	Area 8	Bead	Gold
2232	LC III	Tomb 23	1241	Area 8	Bead	Gold
2233	LC III	Tomb 23	1354	Area 8	Bead	Gold
2234	LC III	Tomb 23	1238	Area 8	Bead	Gold
2235	LC III	Tomb 23	1250	Area 8	Bead	Gold
2236	LC III	Tomb 23	1246	Area 8	Bead	Gold
2237	LC III	Tomb 23	1371	Area 8	Bead	Gold
2238	LC III	Tomb 23	1240	Area 8	Bead	Gold
2239	LC III	Tomb 23	1239	Area 8	Bead	Gold
2240	LC III	Tomb 23	1236	Area 8	Bead	Gold
2241	LC III	Tomb 23	1243	Area 8	Bead	Gold
2242	LC III	Tomb 23	1249	Area 8	Pendant	Gold
2243	LC III	Tomb 23	1235	Area 8	Bead	Gold
2244	LC III	Tomb 23	1248	Area 8	Bead	Gold
2245	LC III	Tomb 23	1353	Area 8	Ring	Gold
2246	LC III	Tomb 23	1358	Area 8	Ring	Gold
2247	LC III	Tomb 23	1367	Area 8	Earring	Gold

KOUKLIA/PALAEPAPHOS

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2254	LC IIIA	Evreti Tomb 8	33	Evreti	Earring	Gold
2255	LC IIIA	Evreti Tomb 8	33	Evreti	Earring	Gold
2256	LC IIIA	Evreti Tomb 8	33	Evreti	Earring	Gold
2257	LC IIIA	Evreti Tomb 8	33	Evreti	Earring	Gold
2258	LC IIIA	Evreti Tomb 8	33	Evreti	Ring	Gold
2259	LC IIIA	Evreti Tomb 8	33	Evreti	Ring	Gold
2260	LC IIIA	Evreti Tomb 8	33	Evreti	Ring	Gold
2261	LC IIIA	Evreti Tomb 8	33	Evreti	Ring	Gold
2262	LC IIIA	Evreti Tomb 8	33	Evreti	Bangle	Gold
2263	LC IIIA	Evreti Tomb 8	33	Evreti	Bangle	Gold
2264	CG IA–B	Skales Tomb 43	82	Skales	Earring	Gold
2265	CG IA–B	Skales Tomb 43	83	Skales	Earring	Gold
2266	CG IA–B	Skales Tomb 43	83	Skales	Earring	Gold
2267	CG IA	Skales Tomb 44	69	Skales	Ring	Gold
2268	CG IA	Skales Tomb 44	70	Skales	Ring	Gold
2269	CG IB	Skales Tomb 48A	16	Skales	Earring	Gold
2270	CG IB	Skales Tomb 48A	16	Skales	Earring	Gold
2271	CG IA	Skales Tomb 49	13	Skales	Fibula	Silver
2272	LC IIIB–CG IA	Skales Tomb 51	5	Skales	Earring	Gold
2275	CG IA	Skales Tomb 58	119	Skales	Plaque	Gold
2276	CG IA	Skales Tomb 58	33	Skales	Plaque	Gold
2277	CG IA	Skales Tomb 61	41	Skales	Earring	Gold
2278	CG IA	Skales Tomb 61	41	Skales	Earring	Gold
2280	CG IA–II	Skales Tomb 67	24	Skales	Pin	Gold
2281	CG IA–II	Skales Tomb 67	51	Skales	Plaque	Gold
2282	CG IA–II	Skales Tomb 67	38	Skales	Earring	Gold
2283	CG IA–II	Skales Tomb 67	69	Skales	Plaque	Gold
2284	CG IA–II	Skales Tomb 67	98	Skales	Plaque	Gold
2285	CG IA–II	Skales Tomb 67	102	Skales	Plaque	Gold
2286	CG IA–II	Skales Tomb 67	107	Skales	Plaque	Gold
2287	CG IA–II	Skales Tomb 67	28	Skales	Bead	Gold
2288	CG IA–II	Skales Tomb 67	77	Skales	Plaque	Gold
2289	CG IA–II	Skales Tomb 67	112	Skales	Plaque	Gold
2290	CG IA–II	Skales Tomb 67	40	Skales	Plaque	Gold
2291	CG IA–II	Skales Tomb 67	55	Skales	Plaque	Gold
2292	CG IA–II	Skales Tomb 67	70	Skales	Plaque	Gold
2293	CG IA–II	Skales Tomb 67	50	Skales	Earring	Gold
2294	CG IA–II	Skales Tomb 67	15	Skales	Plaque	Gold
2295	CG IA–II	Skales Tomb 67	78	Skales	Plaque	Gold
2296	CG IA–II	Skales Tomb 67	21	Skales	Earring	Gold
2297	CG IA–II	Skales Tomb 67	21	Skales	Earring	Gold

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2298	CG IA–II	Skales Tomb 67	16	Skales	Plaque	Gold
2299	CG IA–II	Skales Tomb 67	17	Skales	Plaque	Gold
2300	CG IA–II	Skales Tomb 67	12	Skales	Earring	Gold
2301	CG IA–II	Skales Tomb 67	12	Skales	Earring	Gold
2302	CG IA–II	Skales Tomb 67	11	Skales	Earring	Gold
2303	CG IA–II	Skales Tomb 67	23	Skales	Pin	Gold
2304	CG IA–II	Skales Tomb 67	18	Skales	Plaque	Gold
2305	CG IA–II	Skales Tomb 67	19	Skales	Plaque	Gold
2306	CG IA	Skales Tomb 68	4	Skales	Earring	Gold
2307	CG IA	Skales Tomb 68	4	Skales	Earring	Gold
2323	CG IA–B	Skales Tomb 76	82	Skales	Mouthpiece	Gold
2324	CG IA–B	Skales Tomb 76	135	Skales	Plaque	Gold
2325	CG IA	Skales Tomb 78	41	Skales	Ring	Gold
2326	CG IA–II	Skales Tomb 79	55	Skales	Ring	Gold
2327	CG IA–II	Skales Tomb 79	62	Skales	Ring	Gold
2328	CG IA–II	Skales Tomb 79	53	Skales	Pin	Silver
2329	CG IA–II	Skales Tomb 79	65	Skales	Plaque	Gold
2330	CG IA–II	Skales Tomb 79	56	Skales	Plaque	Gold
2331	CG IA–II	Skales Tomb 79	70	Skales	Plaque	Gold
2332	CG IA–II	Skales Tomb 79	2	Skales	Plaque	Gold
2333	CG IA–II	Skales Tomb 79	9	Skales	Mouthpiece	Gold
2334	CG IA–II	Skales Tomb 79	94	Skales	Earring	Gold
2335	CG IA	Skales Tomb 85	101	Skales	Earring	Gold
2336	CG IA	Skales Tomb 85	101	Skales	Earring	Gold

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INV #	PERIOD	STRATUM/TOMB #	EXC #[3]	AREA	ITEM TYPE	MATERIAL
2339	LC IIA–B	Tomb 1	1201.13	Tsarroukas	Ring	Copper alloy
2340	LC IIA–B	Tomb 1	1201.14	Tsarroukas	Ring	Copper alloy
2341	LC IIA–B	Tomb 1	1201.3	Tsarroukas	Bead	Gold
2342	LC IIA–B	Tomb 1	1201.1	Tsarroukas	Earring	Gold
2343	LC IIA–B	Tomb 1	1201.2	Tsarroukas	Earring	Gold
2344	LC IIA–B	Tomb 1	1201.6	Tsarroukas	Earring	Silver
2345	LC I–IIC	Tomb 3	1201.15	Tsarroukas	Pin	Silver
2346	LC I–IIC	Tomb 3	1201.16	Tsarroukas	Pin	Silver
2347	LC IIB	Tomb 4	1201.18	Tsarroukas	Diadem	Gold
2348	LC IIB	Tomb 4	1201.19	Tsarroukas	Ring	Silver
2349	LC I–IIC	Tomb 5	J 31	Vournes	Diadem	Gold
2353	LC I–III	Tomb 8	1201.25–26	Tsarroukas	Ring (2)	Silver

[3] Excavation numbers starting with '1201' should be preceded by number '1898' for the excavation year.

INV #	PERIOD	STRATUM/TOMB #	EXC #	AREA	ITEM TYPE	MATERIAL
2354	LC I–III	Tomb 8	1201.25–26	Tsarroukas	Ring (2)	Silver
2355	LC IIA–B	Tomb 10	J 80	Tsarroukas	Pin	Gold
2356	LC I–III	Tomb 11	1201.30	Tsarroukas	Earring	Gold
2357	LC I–III	Tomb 11	1201.31	Tsarroukas	Earring	Gold
2358	LC I–III	Tomb 11	1201.32	Tsarroukas	Bangle	Silver
2360	LC I–III	Tomb 12	1201.39–43	Tsarroukas	Ring (5)	Silver
2361	LC I–III	Tomb 14	1201.60	Tsarroukas	Ring	Copper alloy
2362	LC I–III	Tomb 14	1201.49	Tsarroukas	Bead	Gold
2363	LC I–III	Tomb 14	1201.50	Tsarroukas	Bead	Gold
2364	LC I–III	Tomb 17	1201.62	Tsarroukas	Earring	Gold
2365	LC II	Tomb 19	J 92	Tsarroukas	Bead (4)	Gold
2366	LC II	Tomb 19	J 92	Tsarroukas	Bead (3)	Gold
2367	LC II	Tomb 19	J 92	Tsarroukas	Bead (2)	Gold
2368	LC II	Tomb 19	J 92	Tsarroukas	Bead	Gold
2369	LC I–III	Tomb 20	1201.87	Tsarroukas	Earring	Silver
2370	LC I–III	Tomb 20	1201.88	Tsarroukas	Earring	Silver
2371	LC I–III	Tomb 20	1201.86	Tsarroukas	Ring	Silver
2372	LC I–III	Tomb 22	1201.65	Tsarroukas	Ring	Gold
2373	LC I–III	Tomb 23	1201.70–71	Tsarroukas	Bead (2)	Gold
2374	LC I–III	Tomb 23	1201.76	Tsarroukas	Bead	Gold
2375	LC I–III	Tomb 23	1201.79	Tsarroukas	Bead	Gold
2376	LC I–III	Tomb 23	1201.81	Tsarroukas	Ring	Silver

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INV #	PERIOD	STRATUM /TOMB #	EXC #[4]	AREA	ITEM TYPE	MATERIAL
2377	LC IIC	Goldsmith's Hoard	III-6-4	Hoard, Area I	Earring	Gold
2378	LC IIC	Goldsmith's Hoard	III-6-5	Hoard, Area I	Earring	Gold
2379	LC IIC	Goldsmith's Hoard	III-6/6	Hoard, Area I	Bead (3)	Gold
2380	LC IIC	Goldsmith's Hoard	III-6/7	Hoard, Area I	Earring	Gold
2383	LC IIC	Goldsmith's Hoard	III-6/11/1	Hoard, Area I	Earring	Gold
2384	LC IIC	Goldsmith's Hoard	III-6/11/2	Hoard, Area I	Earring	Gold
2385	LC IIC	Goldsmith's Hoard	III-6/11/3	Hoard, Area I	Earring	Gold
2386	LC IIC	Goldsmith's Hoard	III-6/11/4	Hoard, Area I	Bead (9)	Gold
2387	LC IIC	Goldsmith's Hoard	III-6/11/5	Hoard, Area I	Bead (2)	Gold

[4] Excavation numbers starting 'III' should be preceded by the number '1952.'

FIGURES

NOTE TO READER:

The illustrations of all the subtypes included in this thesis are the work of the author, and are an accurate representation of the original objects. Each of these illustrations relates to a particular example in the database; these illustrations are either noted in the text in Chapter 4, or noted in the final column for their relevant inventory number in Appendix C (https://minerva-access.unimelb.edu.au/handle/11343/91078): Catalogue A. The illustrated subtypes depicted for each category are not drawn to scale, but rather, are representative of their general scale. The specific measurements for each illustrated example can be found in Catalogue B according to its relevant inventory number.

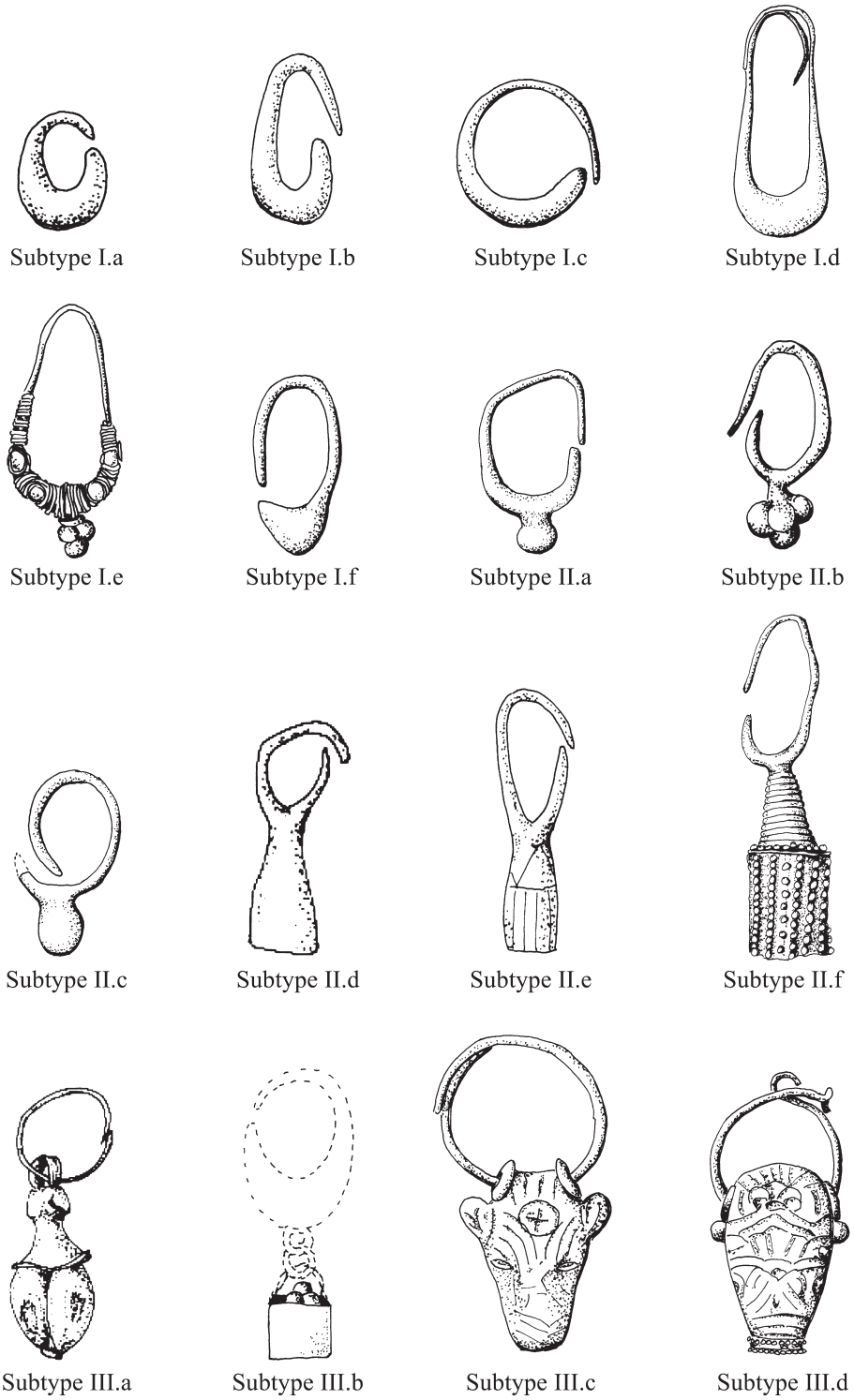


Fig. 41. Category 1: Subtypes I.a–III.d

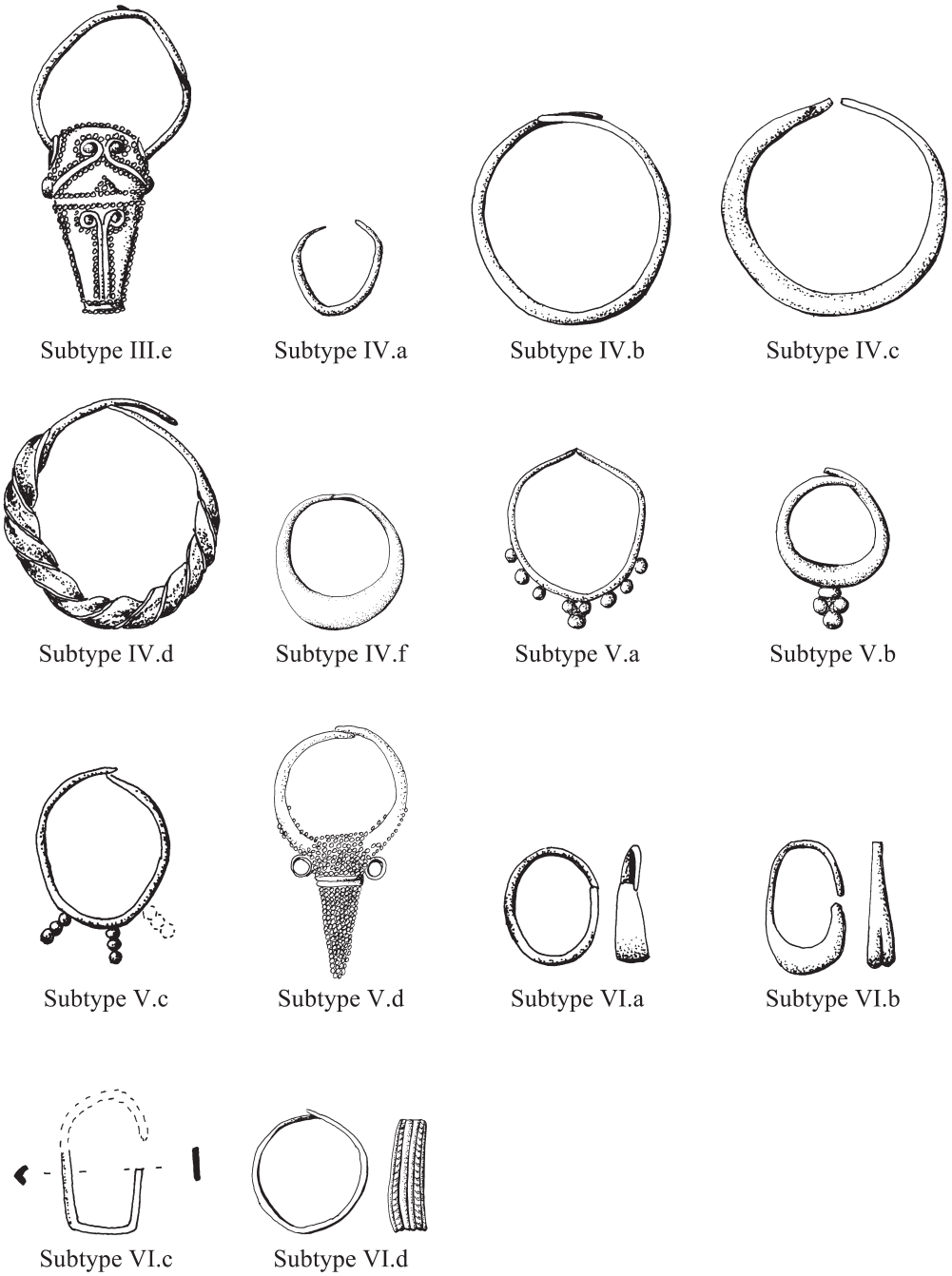


Fig. 42. Category 1: Subtypes III.e–VI.a

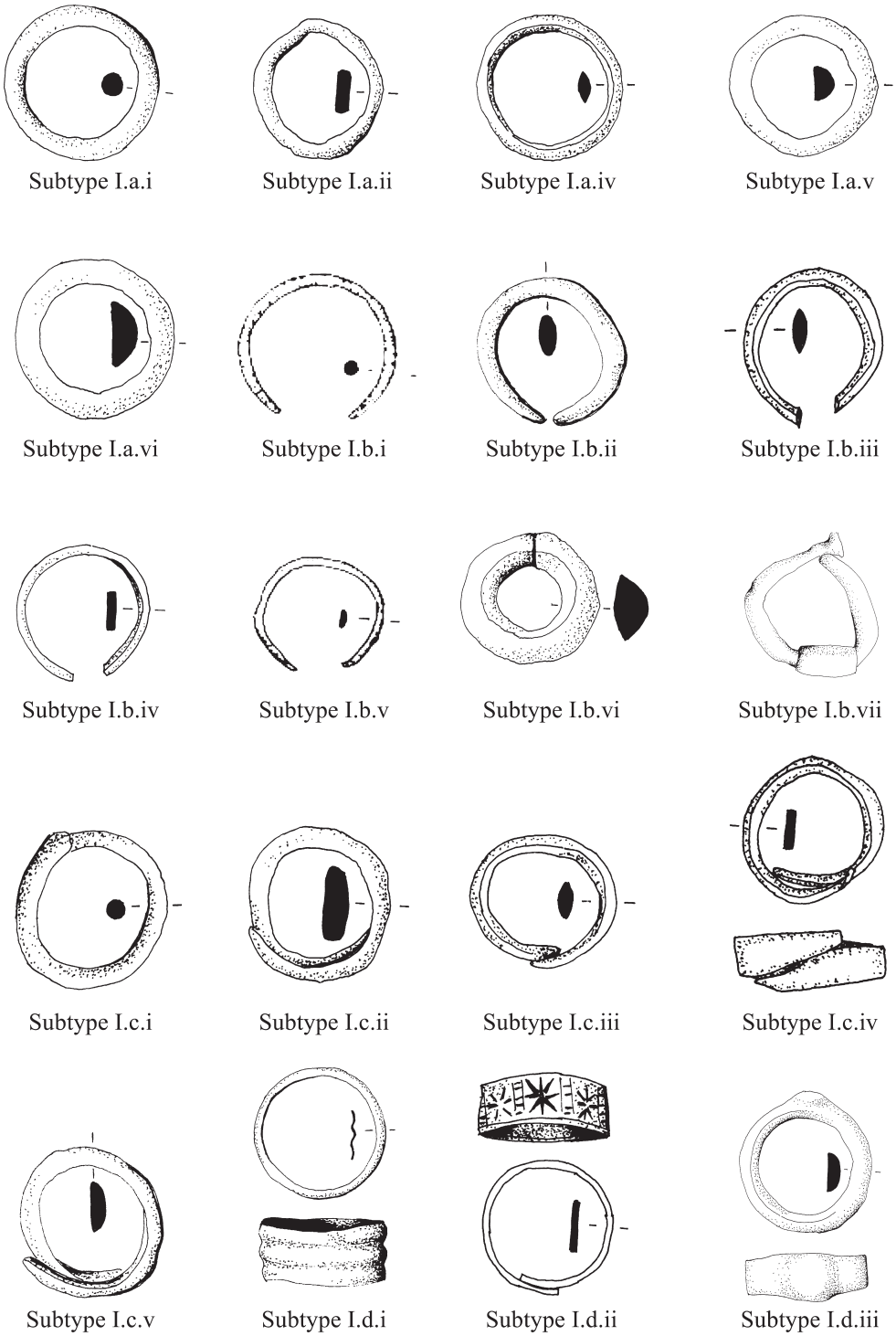


Fig. 43. Category 2: Subtypes I.a.i–I.d.iii

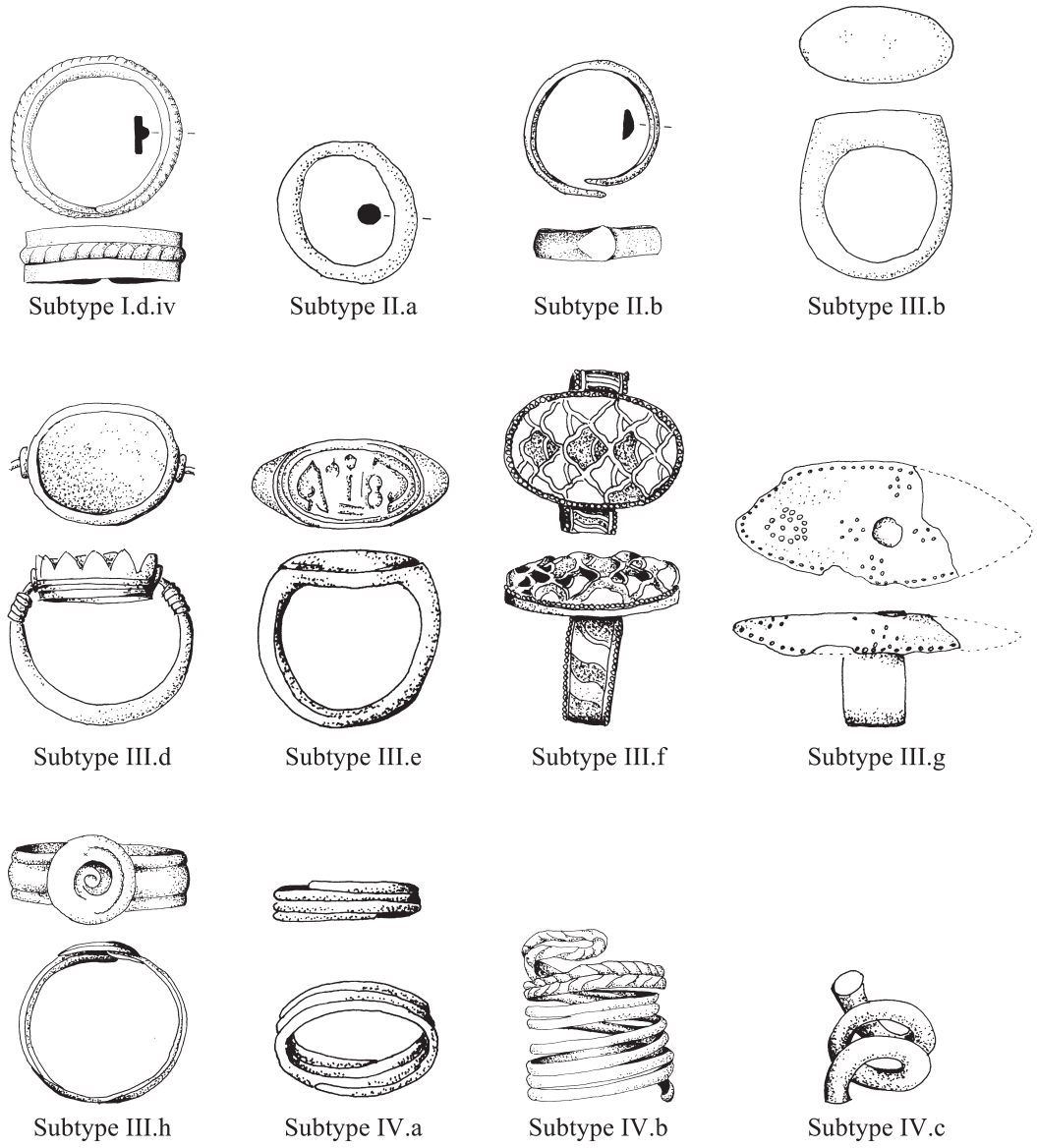


Fig. 44. Category 2: Subtypes I.d.iv–IV.c

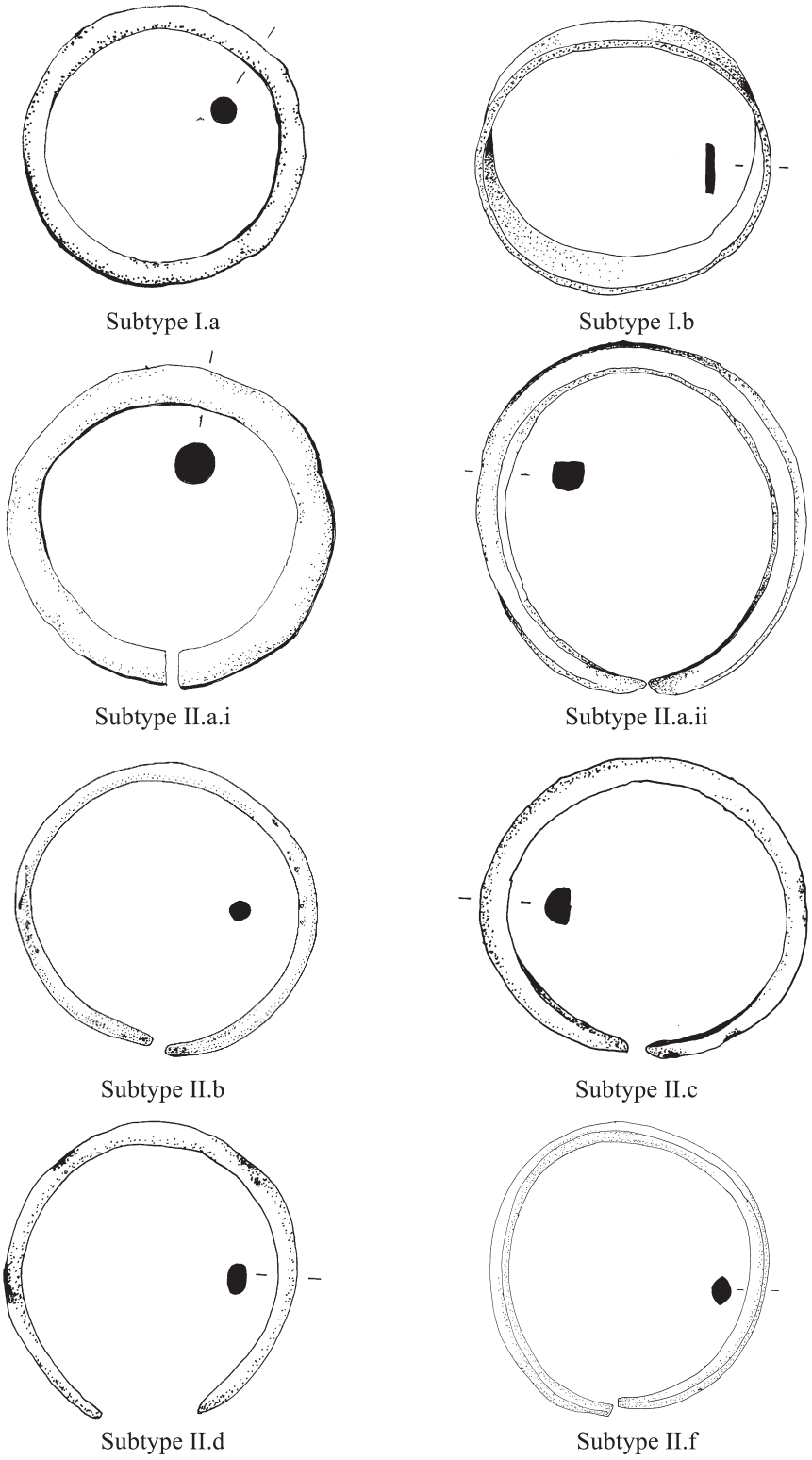
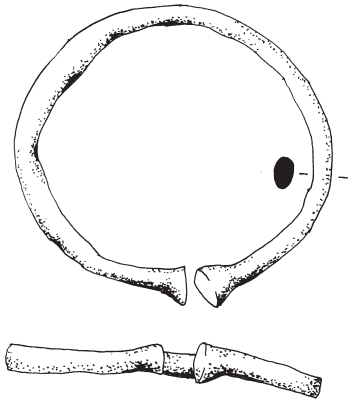
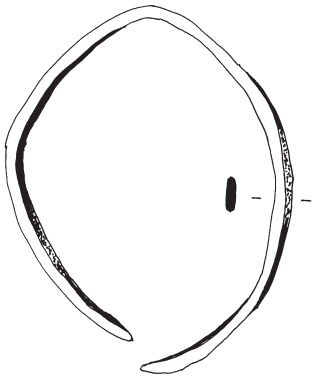


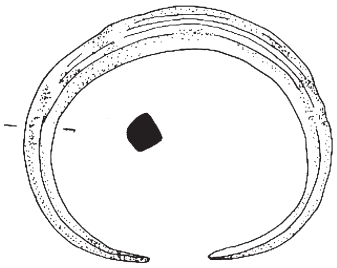
Fig. 45. Category 3: Subtypes I.a–II.f



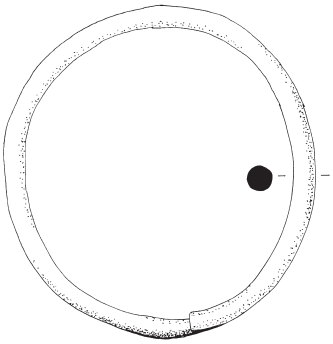
Subtype II.h



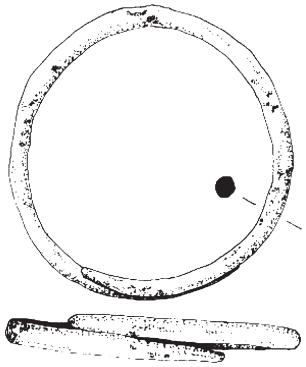
Subtype II.i



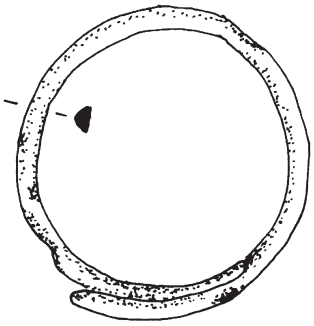
Subtype II.j



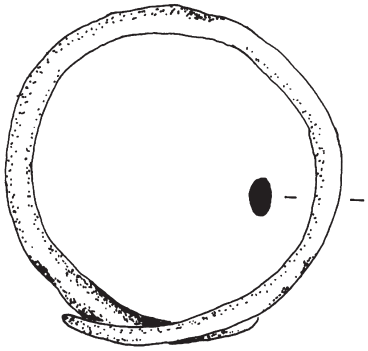
Subtype III.a



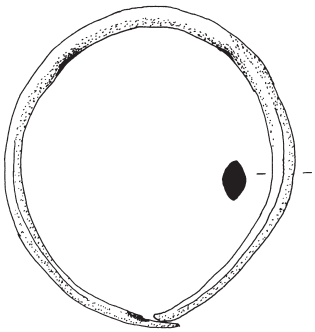
Subtype III.b



Subtype III.c



Subtype III.d



Subtype III.e

Fig. 46. Category 3: Subtypes II.h–III.e

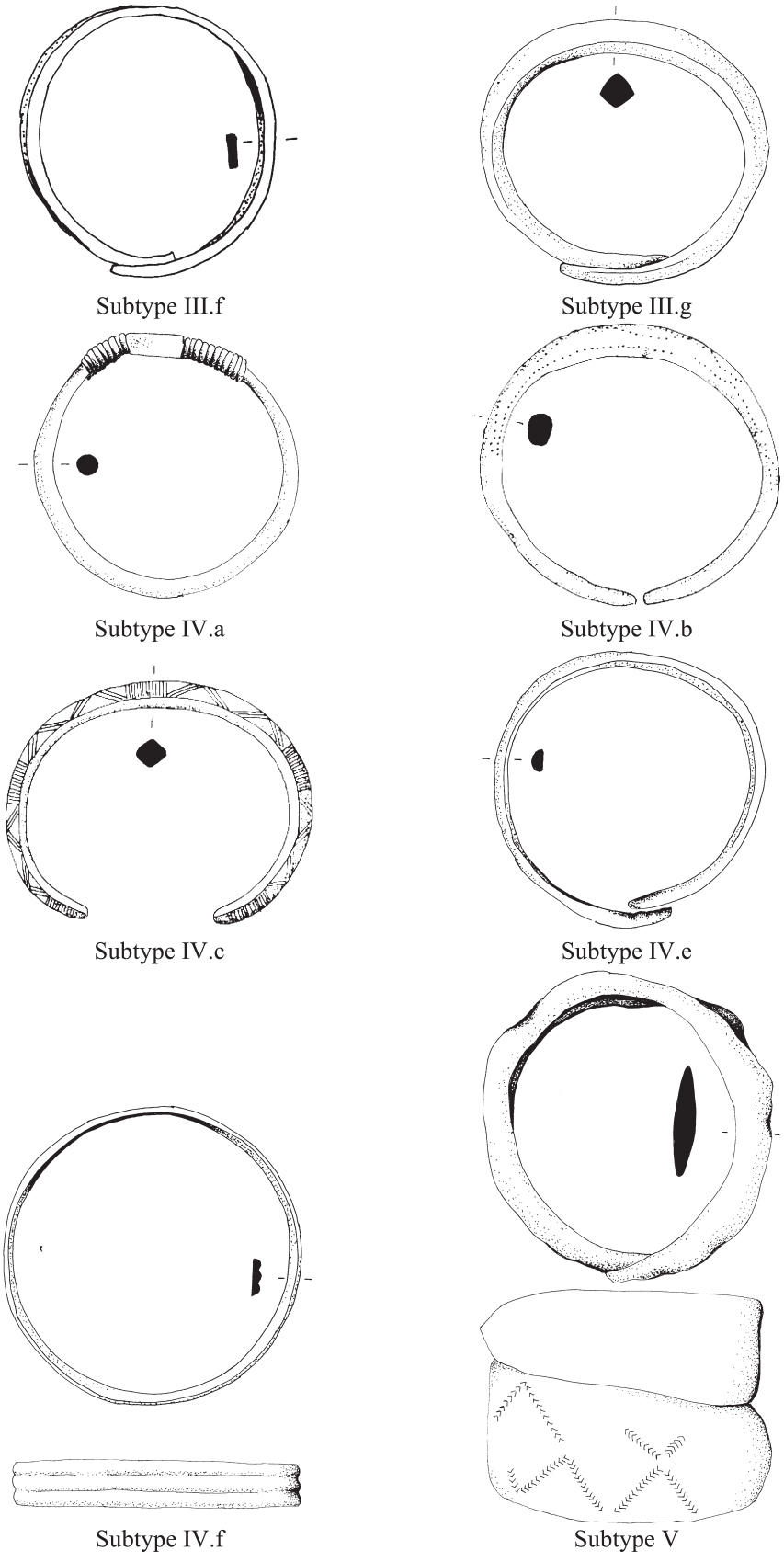


Fig. 47. Category 3: Subtypes III.f–V

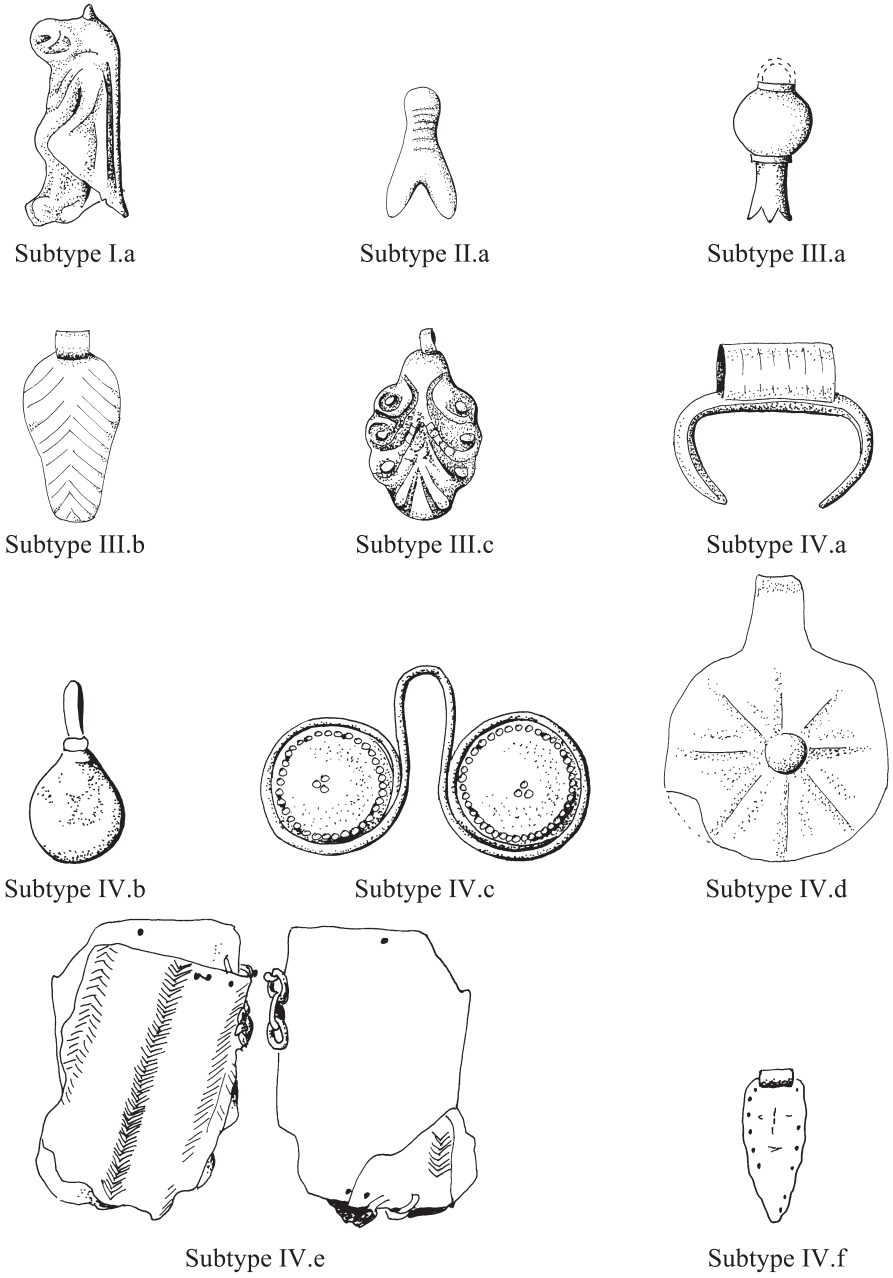


Fig. 48. Category 4: Subtypes I.a–IV.f

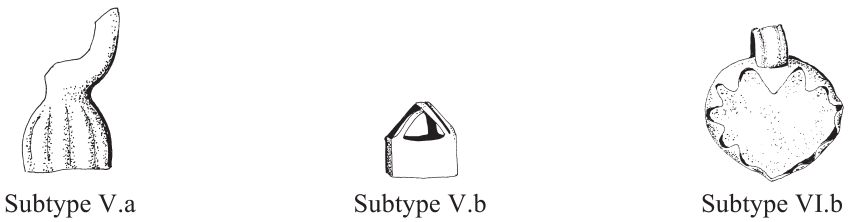


Fig. 49. Category 4: Subtypes V.a–VI.b

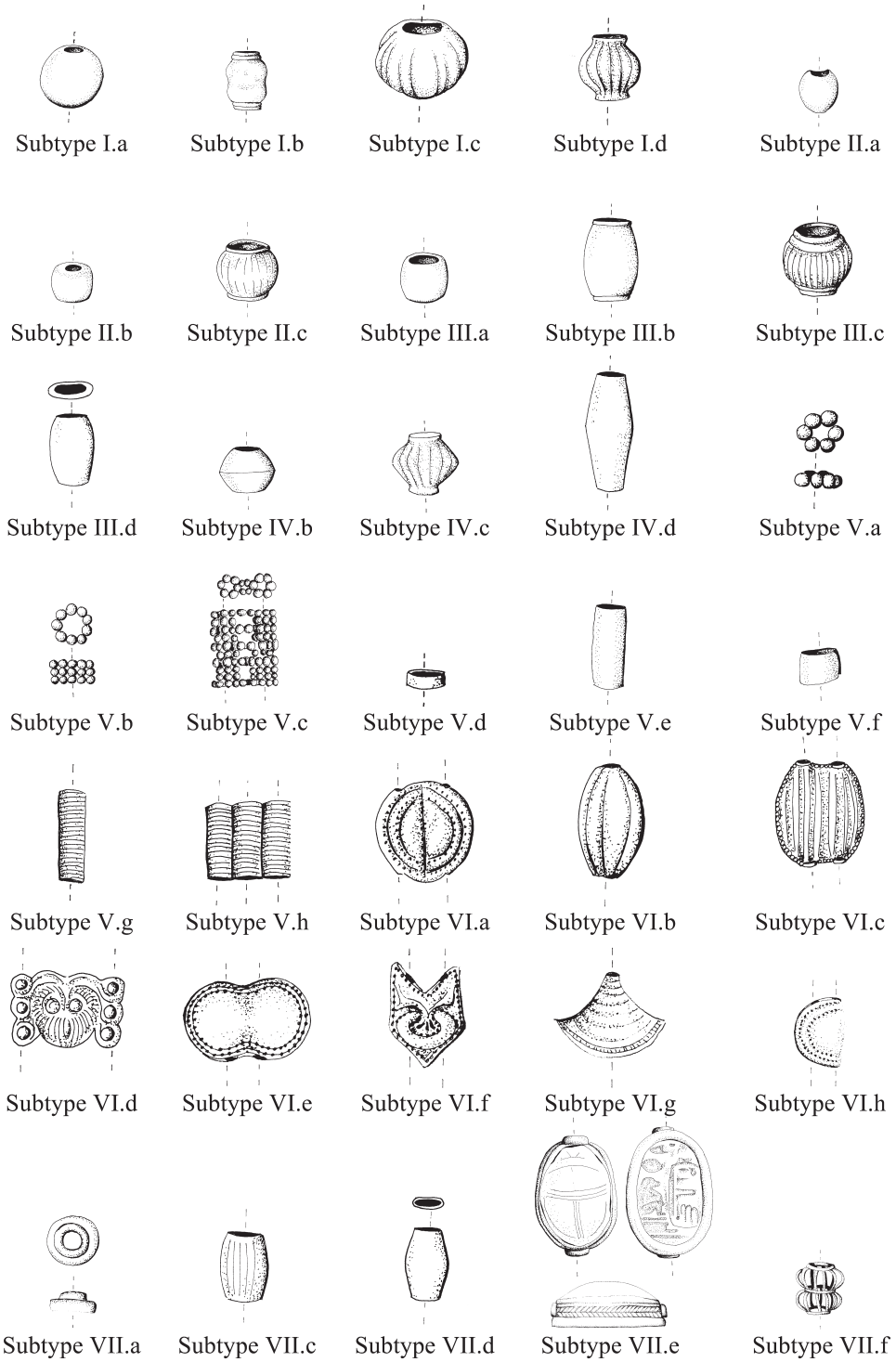
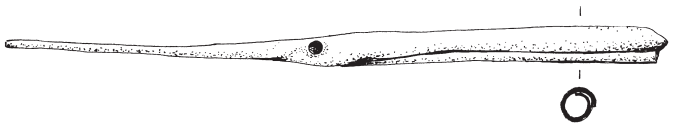


Fig. 50. Category 5: Subtypes I.a–VII.f

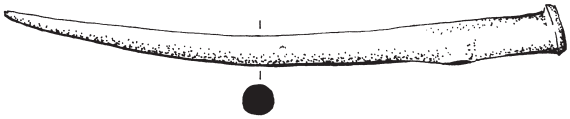


Subtype I.a.i

Subtype I.a.ii

Subtype I.a.iii

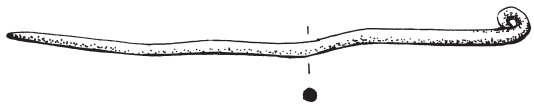
Subtype I.a.iv



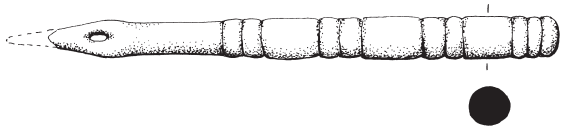
Subtype I.a.v

Subtype I.a.vii

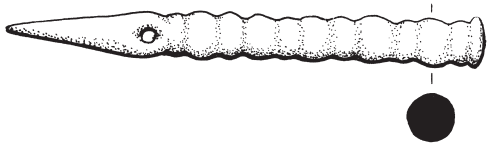
Fig. 51. Category 6: Subtypes I.a.i–I.a.vii



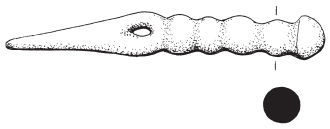
Subtype I.a.viii



Subtype I.b.i

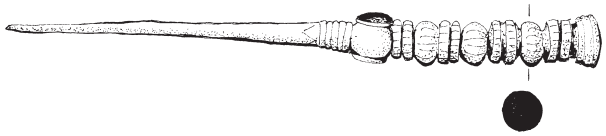


Subtype I.b.ii



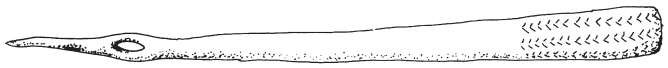
Subtype I.b.iii

Subtype I.b.iv

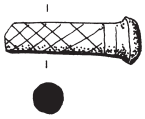


Subtype I.b.v

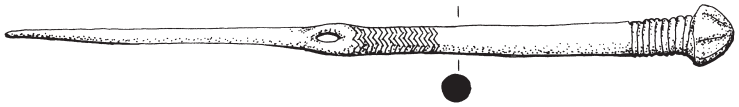
Fig. 52. Category 6: Subtypes I.a.viii–I.b.v



Subtype I.b.vi

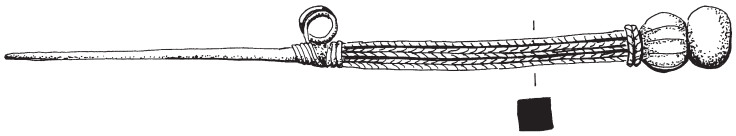


Subtype I.b.vii

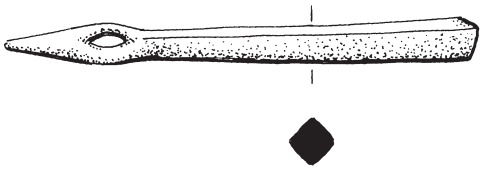


Subtype I.b.viii

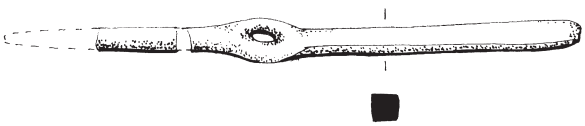
Subtype I.b.ix



Subtype I.b.x



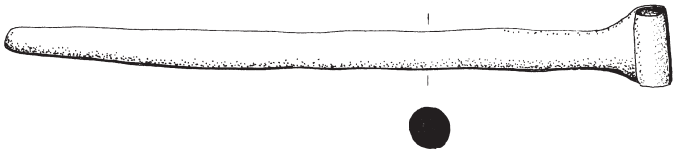
Subtype I.c.i



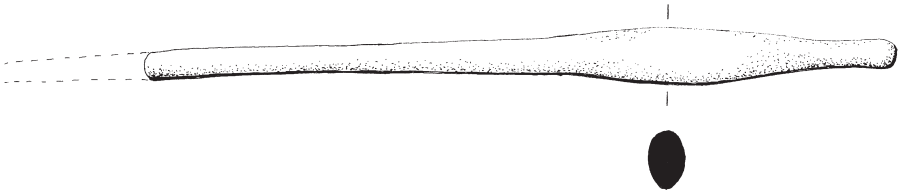
Subtype I.c.ii

Fig. 53. Category 6: Subtypes I.b.vi–I.c.ii

Subtype II.a.ii

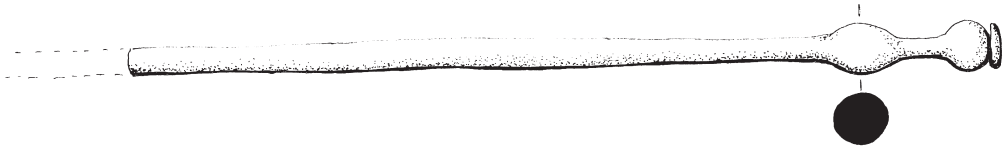


Subtype II.a.iii



Subtype II.a.iv

Subtype II.a.v

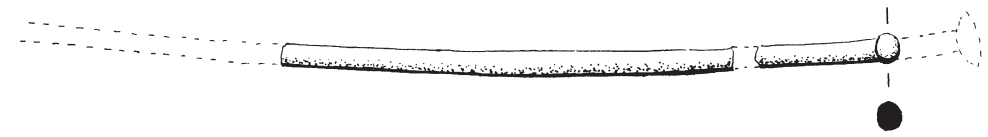


Subtype II.a.vi

Subtype II.b.i

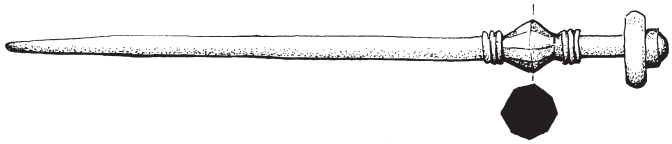
Subtype II.b.ii

Fig. 54. Category 6: Subtypes II.a.ii–II.b.ii

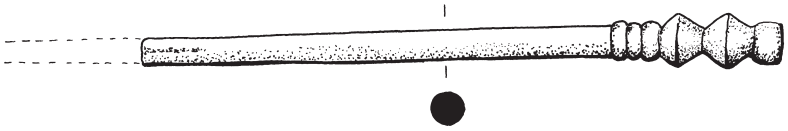


Subtype II.b.iii

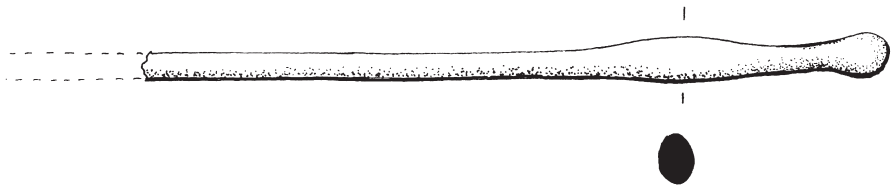
Subtype II.b.iv



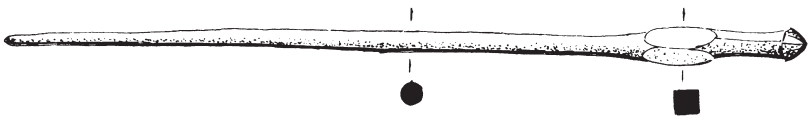
Subtype II.b.vi



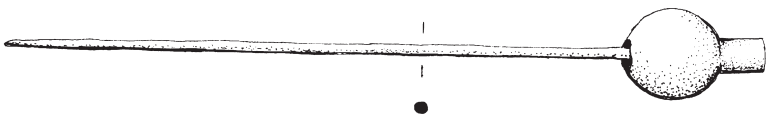
Subtype II.b.vii



Subtype II.b.viii



Subtype II.b.ix



Subtype II.b.x

Fig. 55. Category 6: Subtypes II.b.iii–II.b.x

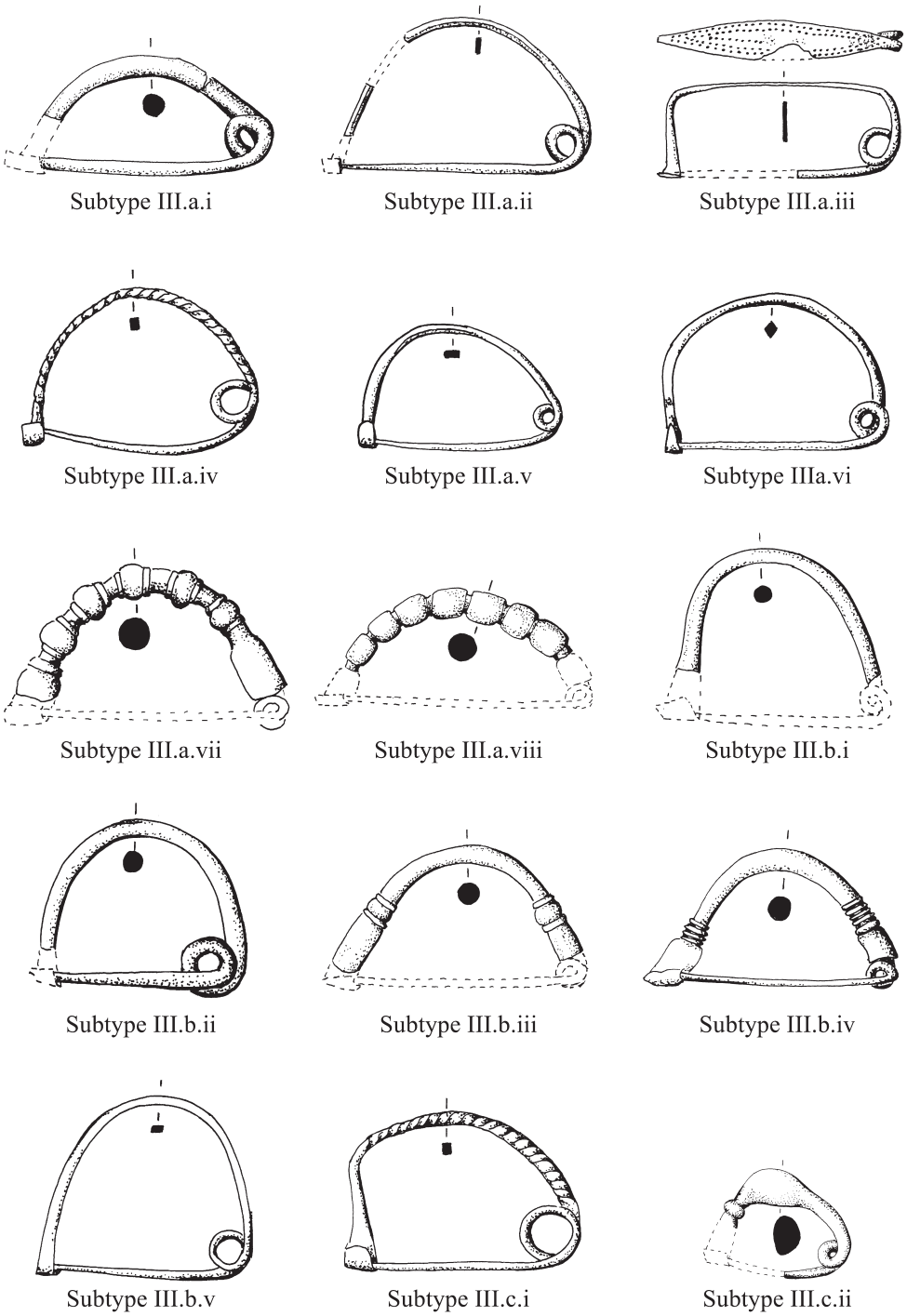


Fig. 56. Category 6: Subtypes III.a.i–III.c.ii

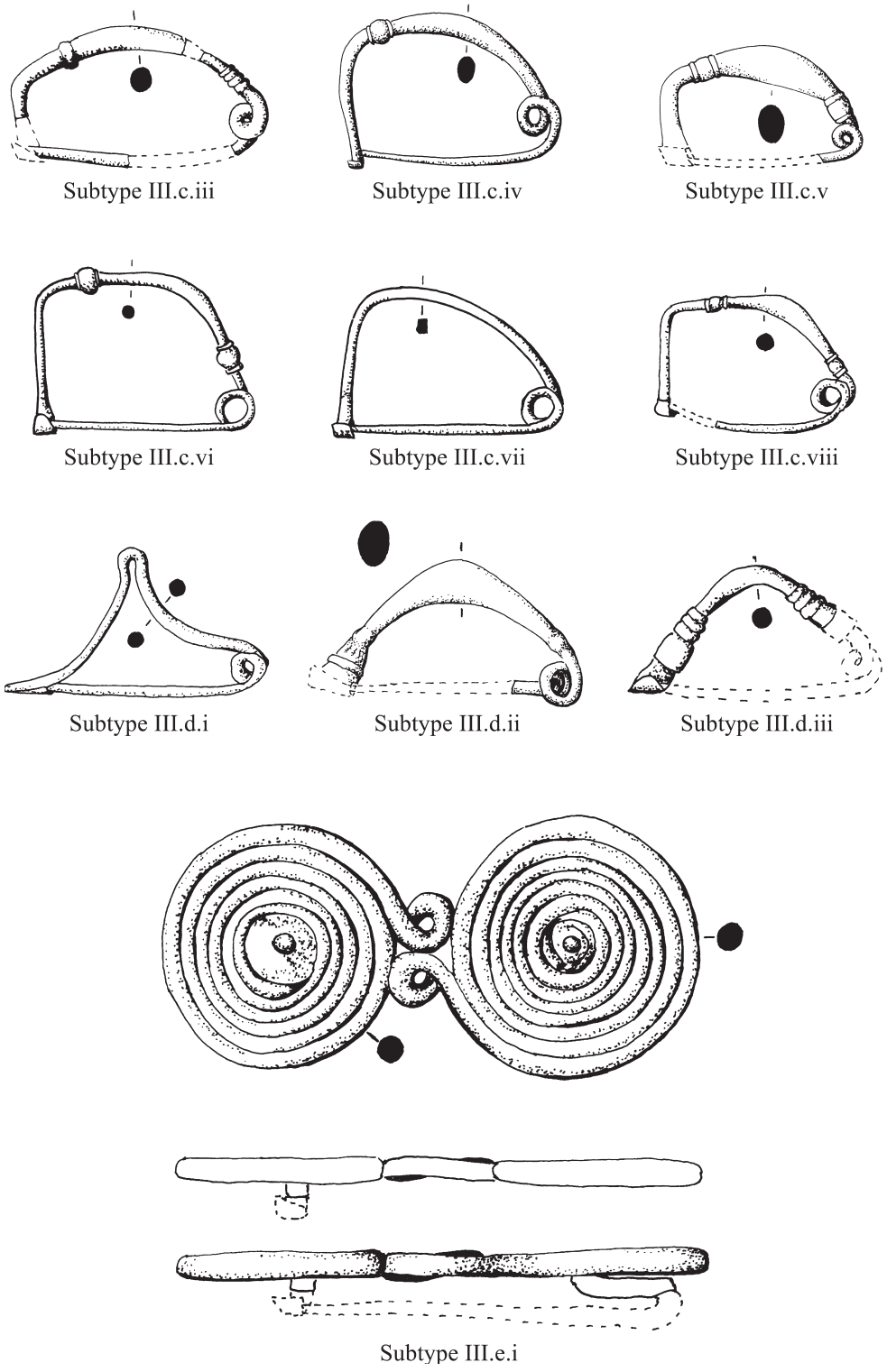
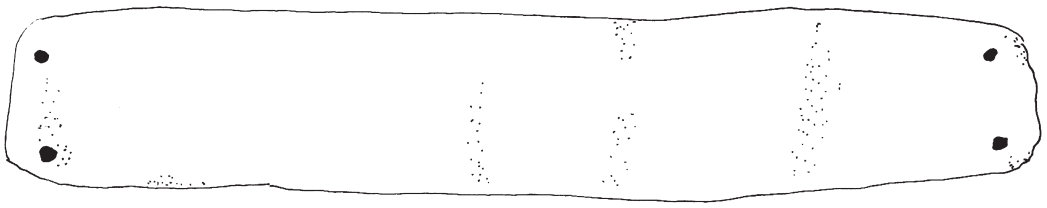
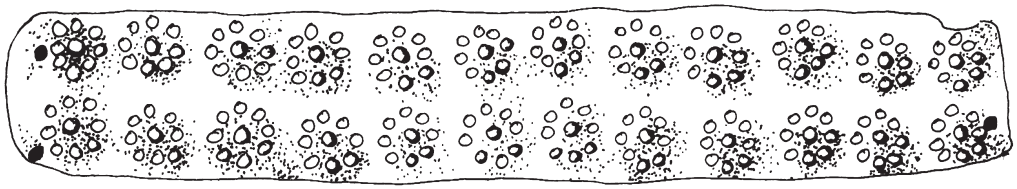


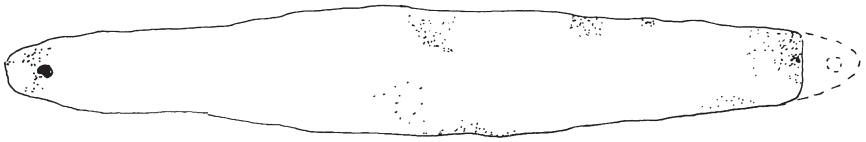
Fig. 57. Category 6: Subtypes III.c.iii–III.e.i



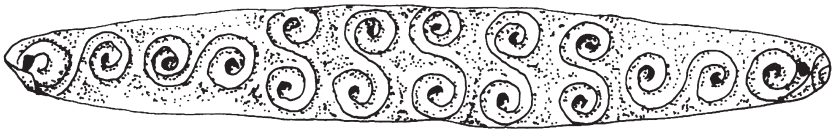
Subtype I.a



Subtype I.b

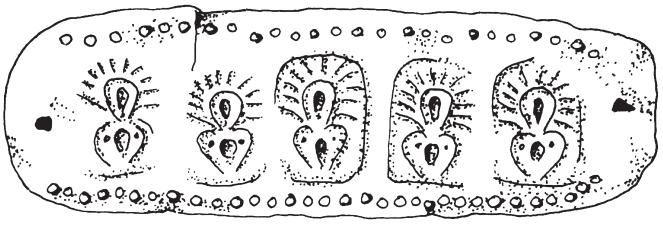


Subtype I.c



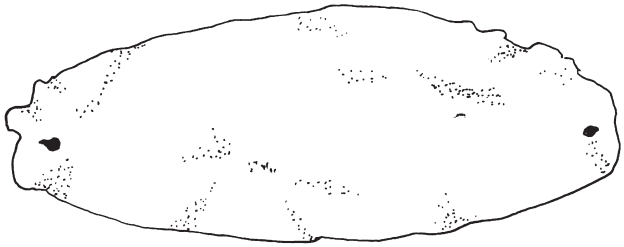
Subtype I.d

Subtype II.a

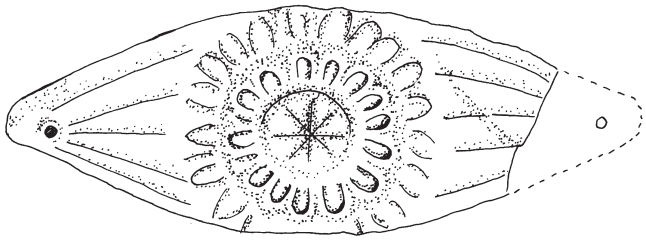


Subtype II.b

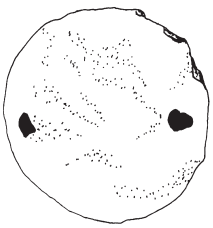
Fig. 58. Category 7: Subtypes I.a–II.b



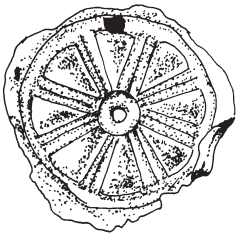
Subtype. II.c



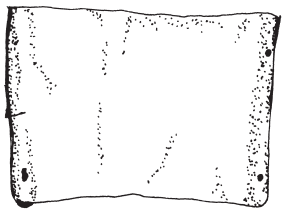
Subtype II.d



Subtype III.a



Subtype III.b



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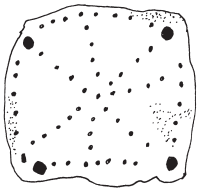

Subtype III.e

Fig. 59. Category 7: Subtypes II.c–III.e

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